# An Investigation Into Training Needs Analysis For Technical Staff Within Libyan Industrial Companies

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**A thesis submitted in partial fulfilment of the requirements of the Nottingham Trent University for the degree of Doctor of Philosophy**

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بسم الله الرحمن الرحيم

**In the Name of Allah, the Most Beneficent, the Most Merciful**

***"They said (****Angels****) Be glorified! We have no knowledge except what You have taught us. You, only You, are the Knower, the Wise"*** . Great truth of God

**قَالُوا سُبْحَانَكَ لَا عِلْمَ لَنَا إِلَّا مَا عَلَّمْتَنَا إِنَّكَ أَنْتَ الْعَلِيمُ الْحَكِيمُ" صدق الله العظيم**

Surah Al-Baqarah, verse (32)

# DECLARATION

The thesis is submitted to Nottingham Trent University (NTU) for the degree of Doctor Philosophy.

I declare that the work in this thesis was carried out in accordance with the regulations of NTU,  its original except where indicated by specific reference in text. I further declare that no part of the thesis has been submitted in support of another degree or qualification of this or any other education institution in the United Kingdom or overseas. Any views expressed in the thesis are those of the author and in no way represent those of the University.

I hereby give consent for my thesis, if accepted, to be available for photocopying and for inter-library loan, and for the title and summary to be made available to outside organisations.

This thesis includes material that will be published in international journals. Appendix 4 shows a list of papers of the candidate under consideration, which are direct products from this thesis:

Signed:........................................ (Candidate), Date: 26/02/2016

# ABSTRACT

The development of competent technical staff for industrial companies is vital for a sustainable economy in Libya and is one of the key factors that will enable the industrial sector to grow. Thus, Libyan industrial companies (LICs) are able to identify training needs for the preparation of training programmes for technicians. This study focuses on the verification of practice of Training Needs Analysis (TNA). According to the researcher's knowledge, no significant research has been conducted in Libya regarding TNA, although some studies have focused on training and development, technical and vocational education. Therefore, this study can be considered as the first of its kind and a contribution to existing knowledge in this field.

The main purpose of this study is to understand the TNA process in LICs and to investigate how TNA is applied in practice. It aims to assess whether the concept of TNA can be applied to these companies' activities, and explores the application of TNA at the Libyan Iron and Steel Company (LISCO) and National Cement Company (NCC).

This study employs a descriptive methodology, with two data collection methods used (qualitative and quantitative). The qualitative method involved a semi-structured, face-to-face interview with managers responsible for training. Quantitative data collection used three forms of questionnaires to collect data from three key groups in the selected companies: technical staff, line managers and those responsible for training.

Findings drawn from the interviews and questionnaires indicated that all respondents held similar views on the importance of TNA and its methods, and that the identification and analysis of training needs is an important requirement for success in any training programme. Participants also disclosed that these companies do not have a formal TNA system, and instead implemented it on a piecemeal basis rather than through a systematic long-term policy to address individual and tasks' needs. There is no comprehensive framework for all stages of the TNA process.

The study's findings support a holistic approach to TNA. One of its key contributions was the development of a theoretical TNA framework in a Libyan context, which was based on western models (Blanchard and Thacker's, 2003 model and Goldstein and Ford's, 2002 model). This suggested framework details the critical factors that can enhance or hinder the success of the TNA process. Therefore, this study contributes to the development of TNA in the LICs and demonstrates that it has implications for both managers and practitioners, such as identifying training needs, nominating for training, and the selection of training programmes. Also, this research forms a basis upon which future research studies can be conducted.

# DEDICATION

I would like to sincerely dedicate this piece of work to:

The spirit of my Mom **AZZA** and Dad **ALI** (Allah Have Mercy on them)

My dearest wife **MUNA**

My daughters and My sons

My Brothers & Sisters

For their continuous love, patience, support and unfailing encouragement during the preparation of this work.

# ACKNOWLEDGEMENT

Above all, I would like to thank the almighty God (Allah) for providing me with the strength to carry out this research and to overcome obstacles during this long process. This thesis is the result of almost four years of work whereby I have been accompanied and supported by many people. It is my pleasure to now have the opportunity to express my gratitude for all of them.

Firstly, I would like to acknowledge the assistance of many people who provided help, support, and encouragement, enabling me to complete my Ph.D. thesis. In particular, my supervision team **Dr. Sarah Kettley, Prof. Amin Al-Habaibeh and Dr. Ani Raiden** at Nottingham Trent University. I consider myself very fortunate to have worked with them, and for their guidance, support, encouragement and comments throughout this study, and their constant assistance in its completion and in producing this thesis. During this time, I have learned a lot of things which will remain in my memory forever and will influence my future academic life.

I would like to thank all of the companies who participated in this study for their time, assistance and patience. In particular, my thanks to the Managing Directors and Personnel Managers and Department Managers for their individual time, and freedom of access to all their employees during interviews.

I am most grateful to all my colleagues in the Faculty of Economic and Commercial at the University of Misurata in Libya for the grant that they awarded me. Also, I would like to express my thanks to my colleagues at the school of Architecture, Design and the Built Environmental at Nottingham Trent University (NTU), for their support and encouragement during the period of this study. Also, my special thanks to the Cultural Affairs Office the Libyan Embassy in London for their efforts to facilitate of the study in the UK. Last but not least, my love and deepest gratitude to my family for their morally generous support and for sacrificing so much for me throughout my studies abroad during my years of study.

Finally, I would like to thank everyone who helped in a direct and an indirect way whose names do not appear here and who have contributed to the successful completion of this thesis.

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# List of Abbreviation

| Abbreviation | Terminology |
|---|---|
| TNA | Training Needs Analysis/Assessment |
| LISCO | Libyan Iron and Steel Company |
| NCC | National Cement Company |
| LIC | Libyan Industrial Companies |
| WTO | World Trade Organisation |
| JICEC | Joint Inter-College Ethics Committee |
| ISO | International Organisation for Standardization |
| SPSS | Statistical Programme for Social Sciences |
| NATO | North Atlantic Treaty Organisation |
| NTC | National Transitional Council |
| BSC | Bureau of Statistics and Census |
| UNESCO | United Nations Educational, Scientific and Cultural Organisation |
| USA | United States of America |
| UN | United Nations |
| WTO | World Trade Organisation |
| CIA | Central Intelligence Agency |
| OTI | Organisation Transparency International |
| HDI | Human Development Index |
| HRD | Human Resources Development |
| HRM | Human Resources Management |
| HRDF | Human Resources Development Fund |
| TVE | Technical and Vocational Education |
| KSAs | Knowledge, Skills and Abilities |
| OEM | Organisational Elements Model |
| O-T-P | Organisation-Task-Person analysis |
| PAM | Performance Analysis Model |
| GSRTC | Gujarat State Road Transport Corporation |
| NTU | Nottingham Trent University |
| GPC | General People's Congress |
| GNC | General National Congress |
| UNDP | United Nations Development Programme |

# Chapter 1. Introduction

## 1.1. Introduction

As competition increases, and in an ever-changing business climate, the realisation that well-trained employees are central to a company's success is permeating throughout the corporate world. As processes improve, so must new skills and knowledge (Wills, 1994). As such, adequately trained staff are vital to organisations in all industries (Carlisle et al., 2011). Training has become more prominent globally, due to the profound effect that the rapid advance in technology has had on businesses, the economy and society. A review of the management literature reveals that the vast majority of studies in this field, including international studies, have focused on developed countries such as the USA, Australia, and those in Western Europe, with developing countries such as Libya being neglected. As the training process within the industry can be significantly affected by the economic, social, political and cultural context, caution should be exercised when contrasting findings from studies conducted in developed countries with those relevant to developing countries. In fact, there can often be great reliability and generlisability issues with doing so.

Evaluations and analyses of training are necessary in ensuring the professional development of all workers including technicians at all administrative levels; at senior management level; at supervisory level; and within executive departments (operational). It is essential that workers' needs in this regard are being met (Iqbal and Khan, 2011). The Training Needs Analysis (TNA) is the first stage in the systematic training cycle (Bowman and Wilson, 2008). Carlisle et al. (2011) highlight the need for further research into the TNA process in order to uncover its strengths and weaknesses for both the organisation and the individual. A number of scholars recommended that more attention is paid to the different training stages, including TNA, especially in developing countries. In Libya, for example, the research in this area is sparse (see Agnaia, (1996); Abdulsalam, (2011); Elfazani, (2011); Altarawneh, (2005); Bu Qefel, (1998); Jamil, (2006).

This chapter introduces the basic background information, aim and objectives of the study, along with some problem definitions. It also provides a rationale for choosing to conduct a case study investigation into TNA usage within the Libyan industrial sector, focusing on LISCO and NCC. Finally, there will be some discussion surrounding research methodology, and a brief relating to the structure of this thesis.

## 1.2. General background to the study

The TNA is the most important phase in the training cycle in terms of ensuring clarity, clear targets, and effective training. El Baqi (2002: 207) describes training as "*an attempt to change the behaviour of individuals by helping them to use a mixture of methods and approaches in performing their tasks*". In other words, it is the difference in the conduct of an individual pre and post training. Such differences include changes in the scope of knowledge and information, changes in attitude, values and approaches, as well as in skills and abilities.

The aim of any change is to achieve positive results, such as higher productivity and better performance. Such changes ultimately lead to better economic results and an increased profits. Researchers claimed that training is an important factor that could facilitate a firm's expansion, develop its potential and enhance its profitability (Cosh, et al, 1998 and Tung-Chun, 2001). Therefore, it is important that employees possess the necessary skills, knowledge and abilities for organisations to achieve their goals and remain competitive and successful (Jamil, 2006). The first important step in planning and developing a training programme is to determine the needs for such a programme. However, too many organisations conduct training in a haphazard manner (Bu Qefel, 1998).

Blanchard and Thacker (2003) consider the TNA to be important because it helps to determine whether a deficiency can be corrected through training. Training scholars also agree that the TNA is necessary to ensure training effectiveness (e.g. Blanchard and Thacker, 2003; Goldstein and Ford, 2002; and Noe, 2005), however, many organisations fail to acknowledge the importance of this step (Jamil, 2006).

## 1.3. Research Problem

There are A number of problems relating to the use of the TNA have emerged in recent years. These include mismanagement, centralization, lack of cooperation among sectors and a poor pay system, as well as the lack of positive management, especially in the areas of planning, organizing, controlling and marketing (Aghila, 2000). A 2002 report produced by the Secretariat of Industry and Minerals further highlighted other internal factors, such as frequent machinery breakdowns and underestimated levels of maintenance; shortage and delay in receiving raw materials (except oil); semi-finished goods and spare parts; inadequate operating systems and shortage of skilled and trained personnel.

The identification of training needs underpins training processes and human resource development. Conversely, defects in selection processes can result in the failure to raise the level of skills and competencies. However, if training needs are sufficiently identified, this leads to an effective selection process. In order for training to achieve desired results, the behaviour, knowledge, and expertise of the targeted users must be considered. Therefore, the identification of training needs represents a focal theme that renders training a successful and influential process.

Training needs are best illuminated when determining differences between current performance and target performance; in other words, differences between an expected performance and an actual performance through the required changes in users. This enables trainees to better perform at their present and expected tasks.

## 1.4. Justification of the study

The justification for this study lies in the increasing interest in training and human resource development in general, and in Libya in particular. Furthermore, effective staff training and human resource development is crucial for businesses who wish to remain competitive in the world economy. The success of an organisation is highly dependent on the effectiveness of the individuals charged with delivering its key goals and values (Pfeffer and Veiga, 1999). In recent competitive business environments, organisations are being challenged to improve their performance to ensure their position in the marketplace. This could be achieved by continuously improving their processes and operations, reducing costs of their services/products, and increasing the capacity of their outputs with a satisfactory quality level, and acceptable prices. A number of scholars assert that more attention should be paid to the different training stages, including TNA, especially in developing countries. The industrial sector has been chosen for several reasons, these being:

### 1.4.1. For the industrial sector

- In the context In the context of the Libyan needs for training, especially from the perspective of training within the industrial sector, there are very few studies concerning management training needs, for example, studies by, Agnaia (1996); Abdulrahim (2011); Elfazani (2011); Atoki (2013). Those studies have shown that many organisations used an informal and unsystematic approach to determining training needs and there was no clear framework for training needs identification and that most companies have no database which can be used to obtain information about its employees.
- There seems to be a large gap in the information and research on training and training needs in the industrial sector. As a result of this gap popping importance idea of conducting a study analytic of training needs. Also, this study is significant given that it is carried out in relation to training needs analysis in two biggest companies in manufacturing field; so a key contribution can be our academic perspective or understanding of how TNA operates in practice. This study will put forward a theoretical framework for the assessment of training needs that might have value for the Libyan context.
- The main The main source of Libyan income from oil and gas and export revenues accounting for 95% of Libya's hard currency earnings. Therefore, the important of industrial sector will be as an alternative source of income from oil and gas.
- Bontis (2004) noted that the modernization programmes of the Arabic countries should aim to adopt principle of "*human investment through education and training*"
- The industrial sector forms an important part of the Libyan economy by creating capital investment and new jobs; freeing the economy from dependence on oil; contributing to the gross national income; providing a better life for existing and future generations, as well as creating an educated and resourceful workforce (Mohamed, 2005).
- Libya is in a transitional phase from a central economy before the uprising on 17 February 2011 to a free market economy and more research in the area of training is required in other sectors, in the particular, industrial sector. Transforming the economy will require a workforce with new skill sets,

therefore, the industrial companies may struggle to find qualified and experienced personnel. To meet the demand, it will be important to establish training programmes for workers and job seekers. This requirement was reaffirmed by the International Monetary Fund (IMF) in its report, issued in 2012, entitled "Libya after the revolution: Challenges and Opportunities".

- The development of competent technical staff for industrial companies is vital for a sustainable economy in Libya and is one of the key factors that will allow for the industrial sector to begin on growth and expansion.

### 1.4.2. For science

- Training should be considered as a human investment; it may not yield any results in short-term, but it to yield returns in the long-term. This research will investigate the core methods used in the identification of training needs and consider their effectiveness.
- This research is an attempt to bridge a gap in the literature on training needs assessment for skills and knowledge in the LICs and to increase knowledge in this area.

### 1.4.3. For the researcher

Strong personal interest in the topic.

- The researcher is a Libyan citizen and the empirical study will be conducted in Libya.
- The researcher has worked in the Divan of Audit and General People’s Committee for Popular Control and Observation, there are several phenomena that became evident in the researcher’s personal supervision over the controlling and auditing of the activities of the industrial companies. The researcher quickly identified a set of problems for their subordinates, such as a lack of experience and preparation, as well as weak motivations to work, a small number of training courses and lack of future planning for training, lack of quantitative measures of performance appraisal, and performance appraisals being kept secret, some social factors affecting the work such as kinship and friendship.

- The researcher has lectured at the Faculty of Economics and Commerce at the University of Misurata Libya in human resource management, operations management, organisational behaviour and Tutor in operations management.
- This research will constitute the initial step for the researcher to build his career as an academic and will provide opportunities for further research.

## 1.5. Training Needs Assessment vs. Needs Analysis

In this study, training needs analysis and training needs assessment possess the same meaning and are used interchangeably. Iqbal and Khan (2011) stated: "*The literature provides another evidence of establishing the relationship between assessment and analysis of needs by using them simultaneously but sequentially being two phases of one process*" (Iqbal and Khan, 2011:447). Primarily, the needs "*assessment*" process ensures a need for training and identifies the skills and knowledge to be provided by such training, whereas the needs "*analysis*" aims to identify component parts of those needs and determines solution requirements. In this context, "*need*" is defined as the process of identifying the gap between existing results and desired outcomes or results between "*what is*" and "*what should be*" (Kaufman, 1994:14). For the purpose of this study, the term "*needs analysis*" is preferred because it is considered the more commonly known term and easily understood by training practitioners in all organisations.

## 1.6. Training and Development in the Arab Countries, Particularly Libya:

Statistics show that expatriates account for 61% of the labour force over all sectors in Libya (Attiyah, 1996). Whilst most governments in the Arab regions allocate huge amounts yearly for training, development and education, a large vacuum remains relating to the requirement for skilled personnel and manpower (Atiyyah, 1996). Consequently, Elfazani (2011) confirmed that the importance of the need for more skilled staff from the local population in most Arab countries, stating that it is imperative to implement a process to achieve this, including "*human investment through education and training*". Commenting on the National Human Development Resource Report (2003), Elfazani (2011) opined that the main problem was not just in the training of personnel, but also the lack of knowledge. Despite the investment in their education systems, most Arab countries depend on foreign expertise in different fields.

In July 1968, the National Institute of Public Administration was developed, which was the first organisation in Libya for management training and development programmes (Agnaia, 1996). Despite aiming to meet their training and development needs for the local workers, Libyan organisations remain dependent on foreign labour to perform a number of technical functions, as well as training their employees.

Technical and Vocational Education and Training (TVET) is one of the most important educational activities, providing the human resources that enable industrial organisations to increase production capacity and improve product qualities. Triki (2010) reported that in 2004, the number of institutions of TVET was more than 120; this is a 70% increase over four years. This indicates that national development plans in Libya focus on productive skills of the workforce in all fields. However, Libya still requires a technically skilled workforce due to the changes in politics, economics and society following the uprising on 17 February 2011.

## 1.7. Different Training Needs Analysis Models

There are several TNA models (Leigh et al, 2000) often classified into two major categories (Jamil, 2006). The first, the OTP model, is a three-level analysis which explores the organisational, operational, and individual requirements. The second category is a performance analysis model, which focuses on identifying the performance discrepancy between desired and actual performance and subsequently analysing the causes of such discrepancies.

Different models have different implications for the identification of needs. There are a number of factors that determine the model that is best suited to an organisation, among them the size of the organisation, the type of activity, and the regulatory environment. It is the responsibility of the organisation involved to discover the model that is best for its particular case.

This study perceives that the LICs face several barriers: social, economic, political and cultural. This may be because of the absence of an appropriate TNA model for use in identifying their training needs or the common barriers to TNA, such as lack of expertise, an absence of job description, dependence on performance records and lack of support for needs assessments. Therefore, the main aim of this study is to investigate current TNA practice in LICs (non-oil) with a view to exploring the ways in which the training needs of technical staff are assessed and to develop a model for the implementation of TNA in this industry sector. The suggested model will combine two types of theoretical models: firstly, the three levels analysis that is more popular among academics interested in investigating training needs to meet organisational, operational and personal needs, and secondly, the performance analysis model, popular among practitioners, which highlights the gaps between expected and current performance.

## 1.8. Research Aim and Objectives

The main reason for undertaking this research study is to acquire further knowledge and understanding in the area of TNA, whilst the main aim is to investigate the current practice of TNA in non-oil LICs. To this end, this study will explore the ways in which the training needs of technical staff are assessed and how to develop a model for the implementation of TNA in this industry sector. The study also aims to recommend measures for improving training planning. Five main research objectives have been identified, and are summarised as follows:

1. To review the relevant literature on TNA, in order to develop a theoretical framework.
2. To provide a wider understanding of the current practice in TNA in Libya through two companies, an investigative study was conducted with the participation of technicians, managers and those responsible for training.
3. To explore and identify the key difficulties and barriers affecting TNA process in LICs.
4. To provide some recommendations based on the participant viewpoints that will help decision makers to devise more effective training programmes.
5. To develop a framework from western and Arabic literature and the outcomes of the empirical research that might be used by LICs as a guideline for TNA process.

Two companies from the Libyan Industrial Companies (LICs) namely LISCO and NCC were chosen as a case study to provide the required data in order to improve TNA in the non-oil sector of Libyan industry.

## 1.9. Research Questions

In this thesis, the original intention was to investigate the use of TNA practices and the methods used in Libyan industrial sector (non-oil), but there an opportunity to explore this in Libyan Industrial Companies (LICs) namely LISCO and NCC. The two companies were chosen to establish an improvement plan for the training needs within the non-oil sector of Libyan industry as a whole.

A series of questions were formulated to identify how training needs are assessed in the selected companies. By answering the following questions, the study seeks to identify and characterize the underpinnings of and procedures related to TNA:

1. **What are the methods currently used to identify training needs?** This is concerned with describing the practice of TNA. The aim is to understand the methods used by companies to collect data on training needs and training programmes.
2. **What problems do the companies face in identifying the training needs of technical staff?** This question aims to explore any barriers to TNA that may exist in the context of LICs.
3. **Is current training provision meeting the needs of individuals and the needs of the organisations?** The aim is to investigate whether current training policies are geared towards developing individuals' skills in order to increase company competitiveness.
4. **How might the companies be helped to identify training needs more accurately?** Following analysis of the study’s findings, the researcher may be able to provide proposals and recommendations to help the companies to select the best approach to identify training needs.

## 1.10. Conceptual Framework of the Research

The conceptual framework is illustrated in Figure 1.2 which included four key stages of the study.

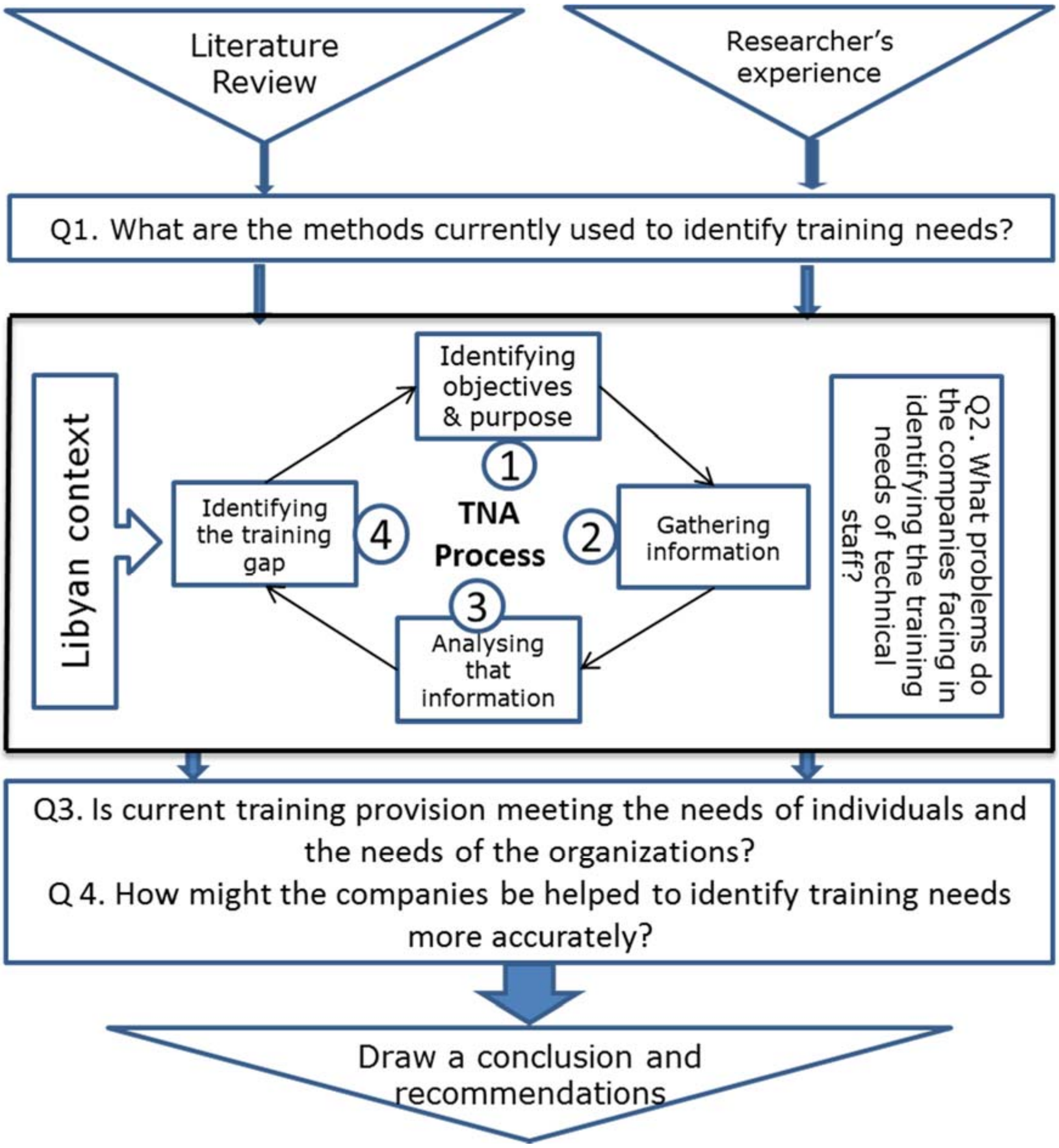


**Figure 1-1: Conceptual framework of the research.**

As there is no single, widely accepted model for TNA, this study explores TNA practice in Libyan industrial companies by compiling a descriptive account of the nature of TNA in these companies and comparing this with existing normative models.

## 1.11. Ethical Considerations

The research is being conducted within the framework of the Research Ethics Code of the University and was approved, by the Joint Inter-College Ethics Committee (JICEC) for Art & Design and Built Environment/Arts & Science. The research study has been conducted using clear ethical procedures. A personal letter was given to the interviewees outlining the purpose of the research, the time required and the content of the interview, and guaranteeing confidentiality. Interviewees were informed that they could withdraw at any time and refuse to answer any question at any stage prior to the final report and consent forms were signed prior to the commencement of the interview. Questionnaires were anonymous, and no data was shared with any other parties. Pseudonyms have been used to prevent the participants from being individually identifiable in any publication arising from this study.

The results will be reported in the form of statistical summaries of group results, and then the original questionnaires will be destroyed. The digital audio and transcripts have been handled only by the researcher and reviewed at his home in Libya, in accordance with data protection principles and the approved research protocol. The digital audio of the interviews will be destroyed, and the relevant files will be erased from the researcher computer when the study is completed.

## 1.12. Research Methodology

A case study approach is adopted as the most suitable research design to achieve the research aim and objectives, as it can provide good empirical evidence.

Qualitative and quantitative approaches were used to obtain an in-depth understanding of TNA practice within the selected companies. There is no rule in research that says only one method must be used in an investigation; using more than one method can have considerable advantages (Johnson and Christensen 2011). Qualitative research aims to explore and describe problems that have already been identified but are not well understood. In addition, it involves gathering, analysing and interpreting data that is difficult to quantify. Conversely, using the quantitative methodology involves an inquiry into an identified problem, with the aim of producing data in the form of numbers. Lawrence (2006) suggested that qualitative and quantitative approaches should be combined.

As such, this study employed a mixed-method approach; the qualitative research is based on in-depth information, and quantitative research is based on large amounts of numerical data that can be statistically generalised (Bryman and Bell, 2007). Semi-structured interviews and questionnaires were elected for use in this research.

The main data for this study was obtained from 505 questionnaires that were distributed to three groups: technicians, line managers and those responsible for training. While other data was obtained from 17 interviews of the managers involved in the TNA process (9 interviewees in LISCO and 8 interviewees in NNC). The data collected from the questionnaires was analysed by SPSS software and data by interviews analysed by thematic analysis. The data from documents explained their content from the descriptive analysis for each case study.

## 1.13. Thesis Structure

The thesis is divided into Ten chapters as follows:

**Chapter One: Introduction**

Sets out the principal concepts relating to the research topic and the aims and purpose of the study.

**Chapter Two: Libyan Context**

Describes the Libyan context, provides general background information, and consists of a brief description of the geography and climate, and describes the characteristics of the population and the economy, with special reference to the industrial sector and technical staff development therein.

**Chapter Three: Literature Review**

Explores the literature pertaining to TNA, to compile a comprehensive conceptual background for the empirical work. It includes a discussion of the relationship between these concepts and also provides results of previous studies that have been conducted in developed and developing countries on TNA.

**Chapter Four: Research Methodology and Methods**

Chapter Five presents and explains, the research methodology adopted for the study, describing the methods that have been employed and elaborating on the methodology adopted, its philosophy, approaches, strategy, sources of data and data collection methods. General background to the quantitative and qualitative approaches are provided, as well as discussing the research design, the identification of a sample population, and data collection methods, including issues relating to sampling, the selection of samples and the different sample sizes. Additionally, it provides a justification for adopting each of these approaches, methods used for the data analysis, research ethics, and the key difficulties encountered by the researcher during fieldwork.

**Chapter Five: Case Study Organisation**

Provides a descriptive analysis of the organisational context of the selected companies, including background information, a description of structure, principal activities and the procedures used to implement the training process.

**Chapter Six: Qualitative Analysis**

A presentation and analysis of the qualitative data produced from the semi-structured interviews, including interview analysis focusing on four themes according to interviews protocol, including the following: the company background; and the interviewee, human resources development and organisational structure; plans, policies and strategies; needs analysis processes and analytical methods of training needs.

**Chapter Seven: Quantitative Analysis**

The key aim of this chapter is to present and analyse the data obtained from LISCO and NCC and the analysis of other information, resulting from further comments made by the questionnaires participants in order to establish the scope and extent of TNA in practice.

**Chapter Eight: Discussion and Findings**

In this chapter, the results of data analysis presented in chapters 6 and 7 are discussed, providing a thorough discussion of each result, which has emerged from both the semi-structured interviews and the questionnaires. This will aim to answer the main research questions and show how TNA and the training process are perceived in LICs. This chapter links all the chapters of the study together, as well as linking the theory with the practical issues related to TNA.

**Chapter Nine: Development of a Conceptual Model of TNA for LICs**

This chapter builds on the findings and presents a framework for improving the TNA process in LICs, which will provide the companies with information to improve their procedures for the selection and nomination of technicians in the selected companies to attend training courses. This chapter addresses the validation of the suggested framework developed in the previous chapter.

**Chapter Ten: Conclusions and Recommendations**

This chapter provides an overarching summary of the preceding chapters, and seeks to synthesise all findings and relate them to the central questions and objectives. Following this, final conclusions and making recommendations.

The research structure design is graphically depicted in Figure 1.2; the study design employs quantitative and qualitative methodology, using three types of questionnaires and semi-structured interviews with senior managers.

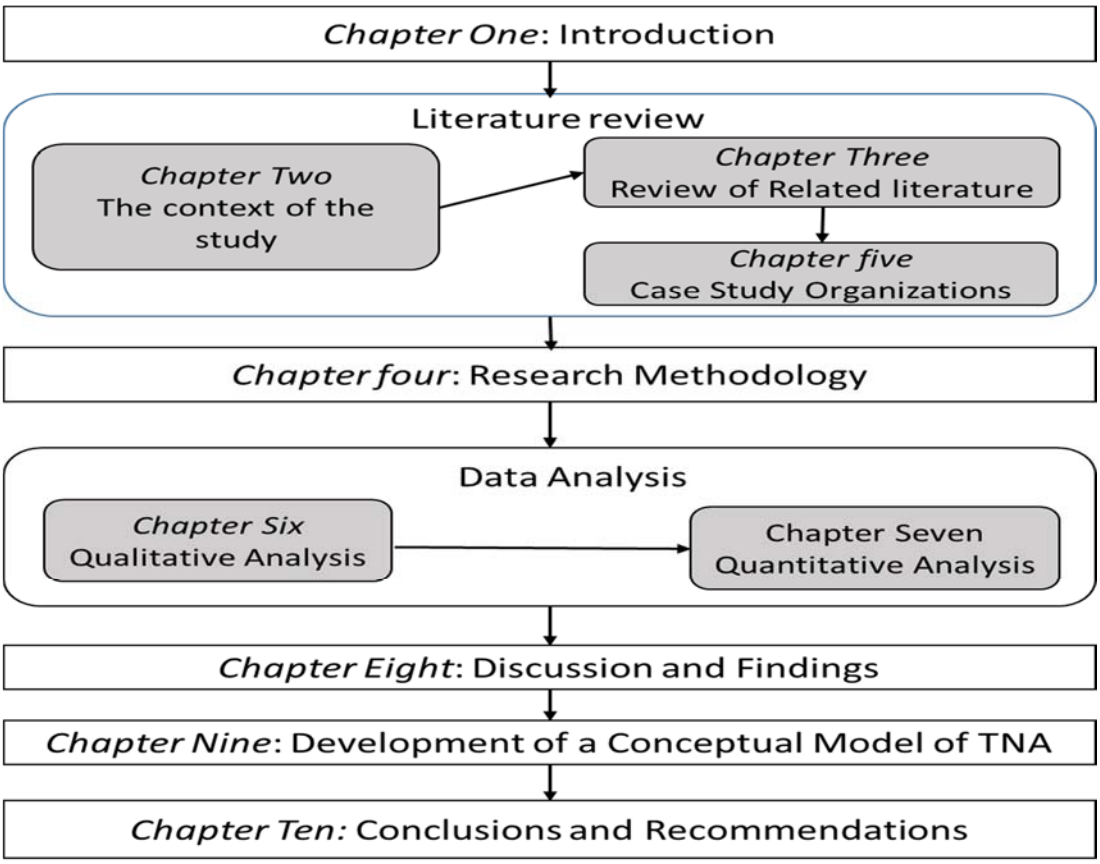


**Figure 1-2: The research structure**

As the study focuses on LICs, the next chapter will provide a contextual background to the Libya, looking particularly at education, training and development and cultural issues that may influence the workforce.

# Chapter 2. The Context of the study

## 2.1. Introduction

In addition to providing a general background on Libya, this chapter focuses on many aspects with regard to the Libyan environment, which include: a country overview, a brief summary of its historical development, cultural aspects, education and training and the industrial sector. Which will assist in discussing issues arising from interviews with senior managers and those responsible for training. It is aimed to fully acquaint the reader with the background of Libya, where this research study takes place.

## 2.2. The Libyan Context

### 2.2.1. Historical background

The strategic location of Libya has resulted in its territory being seized by other nations. Over the years, the Greeks, Phoenicians, Romans, Vandals, Byzantines, Arab Muslims, Sicilians, Spaniards, the Knights of St. John, the Ottoman Turks and Italians have occupied Libya. Therefore, Libya is not unfamiliar with colonialism and foreign domination (Triki, 2010).

The Turkish Ottoman Empire was the strongest and longest occupation, occupying Libya in 1551 AD, and establishing an Islamic government with all its institutions, ending in 1911 AD. In early October 1911, the Italians sent their troops to occupy Libya, continuing to occupy until Germany and Italy were defeated, in October 1942 during World War II, by Allied powers at the Battle of El-Alamein (Aghila, 2000).

After the end of the Second World War in 1943, Libya was divided into two military regions, governed by the British administration in the East and West while the French administration in the south (Aghila, 2000). On 24 December 1951, the United Nations declared Libya an independent state, approving the establishment of the United Libyan Kingdom, a constitutional monarchy under King Idris al-Sanusi. Libya was composed of three separate states of Tripoli, Cyrenaica and Fezzan (Otman and Karlberg, 2007). On 1st September 1969, this monarchy was abolished by a group of young military officers and Libya was transformed from a constitutional monarchy into a revolutionary republic. The country underwent a number of social, political and economic changes, which was the main reason why the Arab Spring revolution, which took place in Libya on February 17, 2011.

As one of the poorest countries in the world, Libya was heavily dependent on foreign aid, especially from the UK and the USA, resulting in these countries being permitted to use military bases in Libya for a period of twenty years from 1953. In 1958, Esso (later renamed Exxon) discovered oil and transformed Libya from a poor agricultural country to one of the rich countries (Fisher 2004).

In September 1969, there was a military coup seeing officers and soldiers seizing the ruling regime. They replaced the monarchy, announcing a change of name to the Libyan Arab Republic. The Libyan economy changed from capitalism to socialism and the Government began to expand the public sector and reduce the private sector; "*Qaddafi regime prohibited private ownership, retail trade, free press, and also subverted the civil service and the military leadership*" (Anderson, 2011:5).

In 1977, the regime established the "state of the masses" which is referred to by virtue of the people, that is personal creation largely dependent on Qaddafi's role only to control and consolidate his power. "*The main goal of Qaddafi was uprooting of any sign of class or other political grouping that might become a source of opposition, democratic or non-democratic*" (Anbarani, 2013:1094).

The 17 February 2011 witnessed the uprising of youth in some Libyan cities and protests increased after the security forces and mercenaries began shooting the protesters and more than 400 were announced dead and wounded; protests turned into an armed conflict against the tyrannical regime. The UN Security Council adopted resolution 1973, imposing a no-fly zone and authorizing the international community to use 'all means' necessary to protect civilians (Zoubir and Rozsa, 2012) and to prevent the Libyan Air Force from bombarding the rebels. A study carried out by Al-manafi (2011) stated that the former regime was not interested in promoting the values of citizenship among the citizens, especially young people, resulting in them living in an economic crisis, psychological and social led to the suppression of the spirit of innovation and of intellectual creativity, and thereby reducing their loyalty to the homeland. The procrastination in realising ambitions and making overdue reforms contributed to the end and the collapse of the regime (Zoubir and Rozsa, 2012). There is another reason that cannot be ignored or forgotten, that the system of government in Libya dominated by one family and the emergence of the principle of inheritance in the Gaddafi regime. On 20 October 2011, the head of a regime died at the hands of the rebels who had considerable support from NATO (Zoubir and Rozsa, 2012). Therefore, the National Transitional Council (NTC) declared the official liberation of the country and pledged to turn Libya into a pluralist democratic state. In July 2012, the country's first free national election in six decades elected a General National Congress (GNC). In August 2012, the NTC handed over power to Libya's newly elected parliament, the General National Congress, who formed an interim government tasked with preparing the ground for a new constitution and fresh parliamentary elections. The Committee Sixty was formed, comprising members from all regions of Libya, and a new constitution was drafted; its first meeting was held on 21 April 2014. The GNC handed Parliament over to the Council of Representatives on 4 August 2014.

### 2.2.2. Religion and culture

During the Middle Ages, Arabs brought their language to Libya, and Libyan people speak the Arabic language with dialects of Berber "Amazigh", and Tebou and Touareg "Swahili". The language is a vehicle for the continuing transmission of information and reinforcing cultural identity.

Islam is the religion of Libya, with the Quran being a source of and guide for right action (Zubek, 2008), and legislation is based on Sharia law. Traditional Libyan society consists of families, clans and tribes (Obeidi, 1996). The family is extended, consisting of a man and his wife, their unmarried children, their married sons and their wives and children, and sometimes unmarried or widowed brothers or sisters of the head of the household, although in modern Libya the situation has begun to change somewhat with the emergence of separate households (Obeidi, 1996). The family, religion and language have a significant effect on the attitudes and behaviour of people in an Arab society (Agnaia, (1997); Aghila, (2000), with family, tribal and regional affiliations being more important than class structure. In Libya, as in most Arab societies, loyalties are usually based on family and region (Obeidi, 1996). Islam plays a major role in Libyan community and in relationships within families and organisations, and the discovery of oil brought a radical change in the social structure of Libyan society, creating new social groups, such as commercial traders, landowners and traders in the land.

The Libyan culture has some distinctive features, in common with other Arab and Islamic countries. It involves an intimately interconnected network of social relationships. The “Wasta” for example, is a direct outcome of such personal relationships alongside family ties. The “Wasta” is an Arabic word that refers to using one’s relationship with someone influential to get something that is either otherwise unobtainable or difficult to get (Atoki, 2013). However, this factor plays a key role in shaping HRM system and other related practices that determine human resources such as training and development.

From among the justification for this study to know the social factors that may affect the process of determining the training needs of individual employees.

### 2.2.3. Location and climate

Libya is situated in the Maghreb region of North Africa and, as Figure 2.1 demonstrates, it is surrounded by Mediterranean Sea to the north, Egypt in the east, Sudan, Chad and Niger in the south, and Algeria and Tunisia to the West. Libya has a total area of approximately 1,759,540 square kilometers and ranks as the fourth largest African country after Sudan, Congo and Algeria; it has the lowest in population among these countries (Yoseif, 2010).

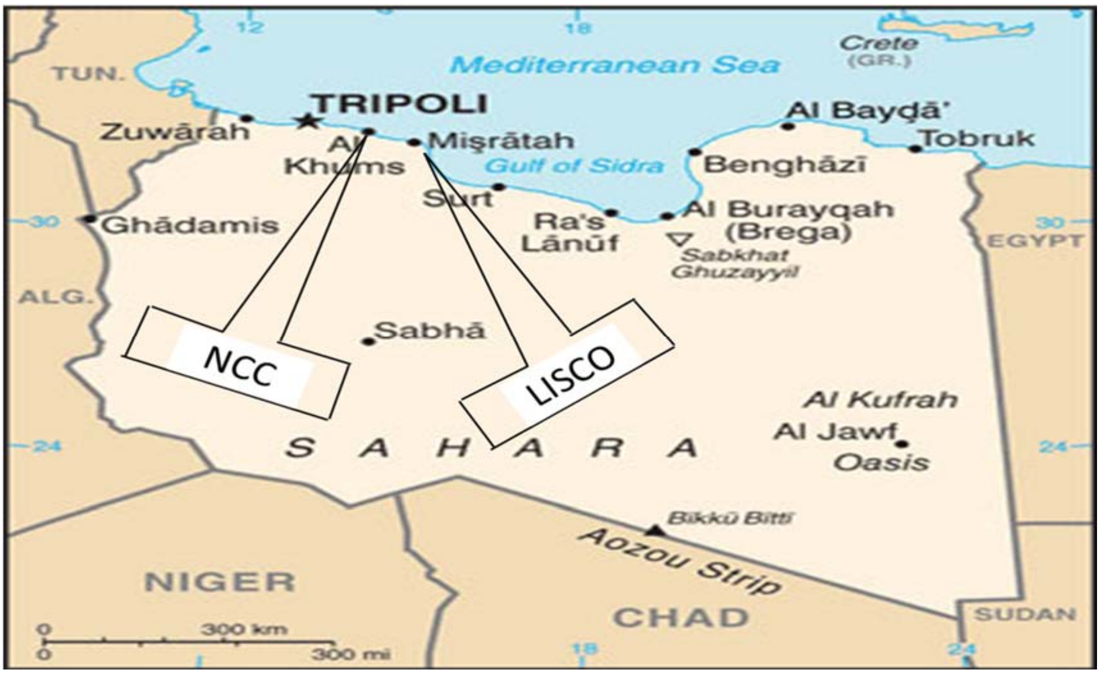


**Figure 2-1: Map of Libya (2013)**

The coastline of Libya is 1,770 kilometres and is the longest of any African country bordering the Mediterranean, with agricultural activity being concentrated on the Mediterranean coastline (Abdulrahim, 2011). The desert accounts for 90% of Libyan soil; its desert climate, with warm summers, prevails, with the exception of a narrow strip extending along the Mediterranean, where the important cities of Tripoli, Benghazi and Misurata are located. The desert climate, with its high temperature, causes the body to sweat and lack salt, reducing the activity and strength of the worker and affecting his psychology, in terms of behaviour, lack of concentration and absorption (Abdulrahim, 2011).

### 2.2.4. Language

Arabic is the official language of all transactions, since the 1970s with English being the second language of the country, for example, in universities numerous scientific, technical, and medical courses were conducted in English. This has contributed to the transfer of training to a large number of workers in the field of industry (Abdulrahim, 2011). However, the Libyan companies complain that graduates in all fields lack English language capability, and require extensive retraining before they can become productive (Porter and Yergin, 2006). Language is a vehicle for the continuing transmission of information, as well as ensuring the continuity of thought (Ibrahem, 2007).

### 2.2.5. Population

Libyans are primarily a mixture of Arabs and Berbers and the small group of Tebou and Touareg in southern Libya (Youssef, 2006). Since its independence on 24 December 1951, the first census was carried out in 1954 recording the population as 1,04 million people (Secretariat of Planning, 1995:3). In the 2012 census, the population rose to 5,18 million people (Bureau of Statistics and Census (BSC) in Libya, 2012).

The distribution of the population is recorded as 49% male and 51% female. Approximately 88% of the total population live in urban areas, such as the capital Tripoli (17%), Benghazi (10%), Misurata (9%), Al Mergheb (8.5%), Jafara (8%) and other cities (47.5%). Taking into account the total area, there are approximately 3 people for each square kilometre. The small population of Libya (5,18 million people) has resulted in approximately 187 thousand foreign professional, technical and basic workers migrating into Libya and forming approximately 3.6% of the population; most of those are from other African nations (Youssef, 2006). Further, there has been a decrease in population growth, and only 32% are under 15 years old (BSC, 2012). The small size of the population has influenced the availability of the labour force. Accordingly, Libya must recognize the significance of qualified and specialised workers being available for development programmes, and work to increase women's role in the economic activities given they represent a majority of the total population.

### 2.2.6. Education

Education is the means that society uses for facing the challenges of the future. Libya became independent and laws and regulations were enacted to govern education systems, which included focusing on education to be an Arab nationalist. Investing in education and training will lead to a workforce having skills and knowledge necessary for economic activities and to shape a better future. It is recognised that educational attainment is a reflection of the structure and performance of an education system in any country, and is an indicator of the human capital in the countries, which is one of the main determinants of economic growth (UNESCO, 2011).

Throughout the Ottoman Period, learning centres were religious institutions in some of the cities, this kind of education was only available to a few individuals, in this institutions where boys memorised the Quran (Zubek, 2008). During the Italian Occupation education in schools focus on teaching the Italian language and culture in order to foster Italian principles and ideas and abolish Libyan identity, Islamic faith. The British administration was provided to Libyans a different type of schooling, in which schools were staffed with Arab teachers to ensure that Libyans were taught in the Arabic language (Hajjaji, 1967).

Education in Libya is free to all, from elementary school to university, and is divided into two parts, namely general education and higher education. General education is divided into two phases: basic compulsory education for nine years (6 primary and 3 preparatory), and middle school for three years. It is through the second part of higher education where the student, according to his speciality, attends university to study for a bachelor's degree. To complete a master and doctorate level degree, the Ministry of Higher Education permits students to study in developed countries, such as the UK, USA, Canada and Australia (Hamdy, 2007).

In 1955 the first university was established, known as the University of Libya, and based in the city of Benghazi consisting of the Faculty of Arts and Education. In 1973, the University was divided into two universities: Benghazi, then called the University of Qar Younes, and Tripoli, which is called Al-Fateh University. Three years later in 1958, the faculties of commerce and economics and Faculty of Science were added (Zubek, 2008).

The education and training system were changed to meet Libya's long and short-term strategies, and in consequence of significant investments in the education sector throughout the period from 1970 to 2000, there was an increase in the number of students, schools, teachers and classes at all levels of education (Hamdy, 2007). Also, the new educational system, which was implemented after the uprising on 17 February 2011, is not introduced, as it is too early to speculate about the system and its goals.

Following five years from the entrance of "The 17th of February revolution", there is no any changes since then and it shows that it has failed to put the first building blocks to rebuild the state and pass the transitional phase and the drafting of a constitution, as a result of struggles and conflicts between the forces within the Parliament and militias the two forces are initially meant to support each other. And thus, it has become a duty and urgency, to put a comprehensive strategy to address this critical situation and get out of it.

### 2.2.6.1. Training and Development

The Libyan Government has recognised the importance of training since 1970 and a great number of technical and vocational institutes and centres were opened and developed in previous years. However, Youssef (2006) stated that the Libyan education system was unable to achieve the goals it has set itself, including providing the training and skills that are required to drive the economy forward. As in other developing countires, the education and training system in Libya is unable to supply, at the right time and in sufficient number, the qualified persons needed for industrial development (Zubi, 1994).

Specialized secondary education has been changed to public secondary education, covering science and literature. Thus, the students who have a secondary school certificate are unable to enter the labour market directly without suitable training. The secondary school is the fulcrum for building the high-level manpower base. Therefore, consideration should be given to accelerated development of secondary school education. However, it may require the establishment of vocational secondary schools, in which most of the graduates are dispatched directly to the labour market to fill the shortage in vocational and technical skills.

The country still faces unresolved problems, which have affected the degree of success of its education and training strategy. The main reason is that for a long time, Libya has concentrated on the quantity rather than the quality of education (Elfazani, 2011). The education and training system in Libya, as in many other developing countries, is unable to supply at the right time and in sufficient number, the qualified persons needed for industrial development (Porter and Yergin, 2006).

This illustrates the importance of this research on the basis the training has become an urgent need and the route to achieving this must be through application of the methodological framework to improve the effectiveness of TNA process and success of training programmes. Nonetheless, on entering the labour market, the graduates of this type of vocational education are still in need of further training when they are recruited in various economic sectors, to provide an introduction to their organisation, their culture and other aspects of their work. This also requires an assessment of training needs and for training to be provided to fill the gap that has been identified.

### 2.2.7. Economy

Libya's economy depends upon revenues from extracting and selling oil and gas. This section intends to give an idea of economic development and the background in which government economic policies developed, it will be divided into the pre and post oil period, as outlined below:

#### 2.2.7.1. Pre-oil period

Before discovering oil, Libya was one of the poorest countries in the world. In this period, Libyan people lived a very simple life, with simple food and limited necessities. Agriculture was the backbone of the economy; the majority of its people are farmers who consume most of their production. The industrial sector was limited, due to lack of raw materials, power and capital investment. Therefore, the Libyans are working in grazing, fishing, handicrafts of local products, such as handloom industry, and industries based on palm fronds also the ceramic industry. Donkeys, camels and horses are used for transportation.

#### 2.2.7.2. Post-oil period

Active exploration of oil in Libya started in 1953; the first well was drilled in 1956 in western Fezzan. In September 1961, production started, and by 1965, Libya was the world's sixth-largest exporter of oil. By 2003, Libya was the eighth largest producer (Hassan and Kendall, 2008), and was transformed from a poor country to a rich country (Hokoma, et. al, 2008).

The discovery of oil marks the beginning of the emergence of the modern Libya, with oil dominating the economy, accounting for 88.6% of government revenue in 2008 and 97.7% of exports, including natural gas and petroleum products (Country Brief "LIBYA", 2010). The oil sector played an important contribution to the development of the physical and social infrastructure of the country.

During the 1980s, Libya began to focus on manufacturing, for example, iron and steel and cement industries, rather than continuing to rely on oil and gas as a key resource for the economy. During the past few years, there has been growth in the manufacturing sectors, especially after UN sanctions were lifted in 2003 (Arshida and Agil, 2013).

The number of industrial companies in Libya has increased during the past two decades, resulting in a greater need for workers in all specialties. This provided an opportunity for the whole workforce, without the focus on the specialization and there has been a significant impact on the policies of training and education in the industrial Libyan companies as a result. Further, companies were affected in many ways by decisions and regulations, which were issued by the Government during the 1980s relating to the use of foreign currency and economic blockade in the 1990s by the UN Security Council Resolution (748), which imposed sanctions on Libya. The result of these sanctions made all economic planning defective because more than 80% of raw materials were imported and this affected Libyan people in many areas such as health, education, industry, transport and communications.

All UN sanctions were removed by June 2006. Since then, Libya has increased its economic reform programmes with initiatives such as privatisation which is aimed to reduce the public sector and enhance the role of private sector in the economy, subsidy reduction and membership of the World Trade Organisation (WTO), with the objectives of a transition from its socialist-oriented economic model to one that is market-based and suitable for other trading partners (CIA World Fact Book, 2009). These reforms may be a testament to Libya's commitment to developing human capital through training and education.

To overcome the problem of reliance on crude oil in the national economy, Libya has sought to diversify the economic activities; one of the main avenues for diversification in manfacturing.

In recent years, the industrial sector has seen a growth in human resources development  (Aghila, (2000); Agnaia, (1997). In order to benefit from their abundance of natural resources, such as oil and gas, developing countries must ensure human resource personnel are effectively trained, if they aspire to economic, social and political development.

Transforming the economy will required a workforce with new skills, therefore, the industrial companies may face difficulties to find qualified and experienced personnel. To meet this demand, it will be important to establish training programmes for employees and job seekers.

### 2.2.8. Political System

#### 2.2.8.1. Situation before the uprising

As mentioned earlier, Libya was declared its independence as a federal state on 24 December 1951, thereafter being known as the United Kingdom of Libya. On 1st September 1969, Libya experienced a military coup and was transformed from a monarchy to a republican regime until 1977, when introduce a new political system based on the so-called "state of the masses" exercised by the people (Youssef, 2006).

The political system worked under the supervision and orders of Colonel Gaddafi, without incurring any responsibility for the Libyan people. The regime did not succeed to secure their needs through a public sector system; it inhibited freedoms and brought inequality and tyranny, contradicting the aspirations of the Libyan people and their youth. El-Anis and Hamed (2013:185) stated that *"Libya under the Gadhafi regime suffered from the absence of any real private sector, particularly one founded on transparent legal controls that would create an environment of opportunities for individuals and groups to engage with competitive investments and other market mechanisms*".

#### 2.2.8.2. The uprising

Following the uprising on February 2011, large numbers of police and army personnel acceded to this revolution, and Libya witnessed the defection of many of the officials of the Libyan diplomatic missions abroad (Zoubir and Rozsa, 2012).

All the cities of the east and some western cities were controlled by rebels, who formed the National Transitional Council (NTC), on 27 February 2011, headed by Mustafa Abdul Jalil. On 5 March 2011, the NTC declared itself the legitimate representative of the Libyan people and declared the city of Benghazi to be the "temporary capital". By the end of August 2011, the rebels launched an attack on

Tripoli, as well as other coastal cities, in order to eliminate the regime. Many countries recognize the NTC as being the legitimate representative of Libya.

At present, Libya is emerging from the revolution that overthrew the Gaddafi regime in 2010/2011, and this has created a suitable environment for competition between industrial organisations and provided numerous business opportunities for new investments in different sectors of the economy, in particular, manufacturing.

#### 2.2.8.3. The current situation

Organisation Transparency International (OTI) began their work in Berlin pursuing worldwide corruption in 1995. It issued its Corruption Perceptions Index report for 2013, measuring the perceived levels of public sector corruption in countries worldwide, scoring them from 0 (highly corrupt) to 100 (very clean). Covering 177 countries, the 2013 index paints a worrying picture, with more than two-thirds of countries scoring less than 50. Only two Arab countries have been listed as being the most transparent and less corrupt globally, namely the UAE and Qatar. The report ranks the Arab states in the following order, citing the best as being: UAE (26), Qatar (28), Jordan (56), Bahrain (57), Amman, (61), Saudi Arabia (63), Kuwait (69), Tunisia (77), Morocco (91), Djibouti and Algeria (94), Egypt (114), Mauritania (119), Lebanon and Comoros (127), Yemen (167), Syria (168), Iraq (171), Libya (172), Sudan (174), and Somalia is the last country in the ranking (175).

The OTI see that these results show that countries suffering from long-term conflicts, weak governance systems, abuse of power and weak state institutions are the same countries that are considered to be the most corrupt and lacking transparency thus leading to a lack of confidence in state institutions. This leads to the inability of governments to apply the laws to stop this corruption, which constitutes a major impediment to development efforts to increase growth and reduce poverty. Therefore, by ranking 172 globally (and 19 in Arab state ranking), this highlights the rampant corruption in Libya, due to political instability and weakness of state institutions that will significantly impact on all aspects of human development.

The report of United Nations Development Programme (UNDP) concerning human development (2013), presents the findings of research economists and sociologists, representing different disciplines in the field of human development. They offer new insights into the development strategies, policies and future prospects for more than forty developing nations which are identified as demonstrating unusual human development progress over the past two decades.

The Human Development Index (HDI), devised by the United Nations, cites three significant indicators of progress to be education, health and per capita income. The report indicates that, over the past decade, all countries have achieved rapid accomplishments in education, health, and income sectors.

In terms of Arab states, Qatar (36) and the UAE (41) show very high human development and showing high human development are Bahrain (48), Kuwait (54), Saudi Arabia (57), Libya (64 global ranking; 6 Arab ranking) Lebanon (72) and Oman (84), Algeria (93) and Tunisia (94). Six Arab countries are in the medium human development group, namely, Jordan (100), Palestine (110), Egypt (112), Syria (116), Morocco (130) and Iraq (131). Whilst the low human development group contains five countries: Mauritania 155, Yemen (160), Djibouti (164), Comoros (169), Sudan (171) and Somalia outside the classification.

Finally, the rank achieved indicates the presence of the infrastructure of HRD in Libya, which includes technical education vocational training, training institutions. This research will assist to identify the training needs effectively in order to enhance the success of the training programmes.

## 2.3. Transition to Democracy

After the fall of the regime in October 2011, the rebels still retained their weapons acting as agents for stability in Libya by securing centres of government, and protecting civilians. However, these groups also served to destabilize the country by fighting each other and hindering the establishment of governmental authority, an example being events in Benghazi and Tripoli during July 2014; thus, the Government has not been able to implement its authority. El-Anis and Hamed (2013) confirm that internal security and stability are necessary for a successful transition to democracy. Moreover, the security situation heavily influences the economy, and it is difficult for a national economy to develop under conditions of conflict when foreign investment and international trade are interrupted. Libya currently must bring the militias under the authority of Tripoli and create a unified security force under a single of command.

The difficulty of disarming the rebels and other groups pose serious challenges to the new authorities in Tripoli. Unless these issues are handled effectively, Libya will undergo a long period of unpredictability (Zoubir and Rozsa, 2012). Anderson (2011:5) stated: "*Libya confronts the complexity not of democratisation but of state formation. It will need to construct a coherent national identity and public administration out of Qaddafi's shambles*". Also, to distance itself from this situation, Libya must restore security and construct a coherent national identity, reviving the trust between clans and tribes, reconstructing public administration, and strengthening civil society through political parties, open media, and non-governmental organisations (Anderson, 2011).

## 2.4. Overview of the Libyan Industrial Sector

As previously explained, after the discovery of oil and gas, Libya experienced a change, moving from a poor country with one of the lowest standards of living in the world, to a one of the world's greatest oil and gas producing nations.

During the last decades, Libya has allocated a large amount of money to establishing many industry complexes in different fields to achieve several goals, such as: creating new sources of income instead of relying solely on the revenues from natural resources, reliance on local products, creating opportunities for new jobs to satisfy the population growth and achieving many other social objectives (Abdulrahim, 2011).

The Government's plans emphasised the need to locate large plants outside the major cities of Tripoli and Benghazi, concentrating heavily on new industrial growth in a series of coastal towns, such as the steel complex near Misurata, the petrochemical complex at Ras-Lanuf and cement industry at Al-Kums. Most of these companies remain state-owned and the workforce was made up of government employees. The Government fully controls these companies, which must be audited by the General People’s Committee of Institution for Auditing and Technical Supervision, now re-named Divan of Audit.

Each company is responsible for self-managing, running its operations, setting its general policy, and establishing the administrative and financial systems. However, the Ministry of Economics determines the price of all products. Profit is a lower priority for Libyan companies, because raising profitability is a huge challenge for Libyan manufacturers (Abdulrahim, 2011). The various industries in the industrial sector are divided to three groups; big, medium and small, according statistics of the Bureau of Statistics and Census in Libya (2012) (see Table, 2.2), and are classified according to size.

**Table 2-1: Industrial companies number according to size**

| No. | Types of industry | Number | Total employees | % | Total capital | % |
|---|---|---|---|---|---|---|
| 1 | Big Manufacturing Industries | 88 | 35509 | 29.5 | 933746 | 60.7 |
| 2 | Medium Manufacturing Industries | 659 | 11524 | 9.5 | 3859 | 0.4 |
| 3 | Small-scale industries | 18277 | 74719 | 61 | 598956 | 38.9 |
| Total | | 19024 | 121752 | 100 | 1536561 | 100 |

Ali and Harvie (2013) pointed out a number of reasons that contributed to the under-performance of economic growth and development in Libya, including the lack of transparency, inefficient government institutions and widespread corruption. This recently resulted in the uprising that led to the ending of 42 years of dictatorship in October 2011.

The cost of the this war was high with up to 30,000 lives lost, destruction of the country's infrastructure and reduced oil production, which is the country's major source of revenue, from 1.6 million barrels per day before the war to 50,000 barrels a day (Ali and Harvie, 2013). The economy and infrastructure require rebuilding to achieve sustainable growth, by focusing on increasing productivity through increased investment in infrastructure (physical capital), and human capital as well as the acquisition of technology in the oil and non-oil production sectors.

### 2.4.1. Current status of manufacturing companies

Since independence, Libya has been faced with the problem of the small size of its population Elfazani (2011). At the time of the first official census in 1954, the population was recorded as being 1,041,599, whereas the last census in 2012 records 5,175,997 (Female 2,557,963 (49%) and Male 2,618,034 (51%) (Bureau of Statistics and Census). The size and structure of Libyan society have affected the manpower available for development programmes in different fields of work and has influenced the availability of a skilled workforce.

Accordingly, the auditing of those public companies has experienced many problems including technical, financial, administrative, and social problems, with most of them suffering from a lack of qualified and experienced personnel. Abdulrahim (2011: 33) pointed out that "*Management inertia, poor production quality, unskilled labour and arbitrary decision-making, were all factors that also significantly contributed to the inefficiency of manufacturing companies*".

## 2.5. Libyan manpower

As stated previously, the size and structure of the population in Libya is very small compared to the needs of various industrial projects. This has led to greater dependency on non - Libyan manpower in order to implement development programmes. Libya is a rich country, compared to its neighbours such as Egypt, Sudan, Niger, Chad and Tunisia, and the geographical position allows and facilitates the entry of large numbers of workers from different specialties.

Libya opened itself up to the global labour market to cover the needs of that market, and this has affected the increase in operating costs due to remittances being made abroad as well as the increasing number of unemployed and job seekers from Libyan itself. To solve these problems, the Libyan Government must recognize the importance in investing in human capital and vocational training, in order to prepare and train its workforce, and increase the percentage contribution and participation of Libyans, especially women, in the workforce, and develop various motivation techniques in order to increase skills and knowledge. Unfortunately, one of the major reasons for the growth in public service employment in developing countries is the desire for the government to use employment as a tool for overcoming unemployment as a temporary solution.

More recently, in 2013, the Human Resources Development Fund (HRDF) was established under the supervision of the Ministry of Labour and Rehabilitation, and by the Cabinet decision No. 623 (2013) dated 16 April 2013. The aim of the fund is to support the efforts in rehabilitating the national workforce and to recruit in various areas through alignment between education outputs and labour market requirements.

Using recruitment as a tool for overcoming unemployment as a temporary solution did not succeed, and the rate of unemployment in Libya increased; the Fund was interested in the programmes and plans aimed at anti-unemployment and to provide job opportunities for youths after training and rehabilitation according to the requirements of the labour market.

Despite this, Libya is still faced with a shortage of skilled and trained people in several fields; new needs have emerged as a result of changes in the economic and social structure after the revolution of 17 February 2011.

Higher education and vocational education and training play a key role in the development of countries. Vocational education and training is a fundamental player, which provides the human resources that render industry more productive, improve the quality of production, and narrow the gap between the developed and developing countries (Atoki, 2013).

### 2.5.1. Training institutions and centres in Libya

There were approximately 1,500 different institutions in consulting and training in 2010 distributed across Libya region, aiming to provide consultancy services and training. While the training of civil servants, the National Institute of Administration, is in charge of the training employees in the administrative sector, approximately 200 training establishments have been registered with the Ministry of Labour, and approximately 10% (20 Training Institutions and Centres) of them operate under approved training programmes (Abdulrahim, 2011). However, all registered training organisations can provide training for workers in the manufacturing sector.

### 2.5.2. Difficulties facing Libya in moving to training and development

The success of HRD programmes for the workforce is unnoticeable, and less so its contribution to the pace of development. One of the difficulties is that high manpower requirements and the size of population are small, which has led to an increasing proportion of immigrants to the Libyan labour force and lack of integration in society. Abdulrahim (2011) summarised the difficulties as follows:

a) Training needs are not sufficiently specified. The reason can be traced to the lack of clear objectives and standards that should be the basis for this assessment. Also, the public organisations often send their employees on training programmes without assessing their needs and ensuring that these needs are met through programmes selected for training; currently available training programmes would seem adequate to cover only about 25% of the needs.
b) The recruitment of managers is based on other factors such as loyalty to superiors, political affiliations, tribal, kinship and personal connections and most Arab trainers work for short periods and then change their mind and are unwilling to work longer.
c) Shortages in qualified personnel for training: due to the fact that demand for quality trainers outstrips supply, and when they establish a reputation the trainers usually prefer to move to jobs that pay higher wages and provide better benefits.

## 2.6. The influences on the TNA process

Family clans and tribes, in a traditional society like Libya, create strong social ties and an important impact on the life and behaviour of individuals. They continue to play a major role in socialising and inculcating social norms and culture (Obeidi, 1996). However, it has a further broad impact on the Libyan economic environment, for example, managers often avoid accepting advice, opinions or any feedback from their subordinates. The failure to obtain feedback from subordinates makes performance appraisals unclear, which are used as a basis for determining training needs. Furthermore, individuals who achieve a weak level in performance are not dismissed from work because those responsible are expecting them to face disapproval from society. Therefore, training for this individual is seen as a waste of time and money that withholds the opportunity for training for someone else.

Personal relationships and family ties are also important in the process of recruitment and selection of managers and employees. The reason being that if a person is from a respected family and has a certain level of social status, they are more trusted in business. This means that it is common to recruit employees who are not qualified, and they need to have more training so that they are able to work.

## 2.7. Summary

This chapter has highlighted and provided an overview of Libya in terms of its historical, political, cultural and economic backgrounds, and has included information about the current situation of Libya after the uprising of 17 February 2011. This background information will contribute to the interpretation, analysis and discussion of the important findings relevant to the TNA in industrial companies in Libya.

An assessment of training needs in the Western context is the initial step in planning a training programme and can be associated with organisational success (Cekada, 2010; Bowman and Wilson, 2008; Donovan et al. 2001; Anderson, 2000). However, in a Libyan context, there are certain social and cultural factors intervening in this process, including favouritism, '*Wasta*', and social relationships.

The main characteristics of the Libyan context, which play a role in affecting social culture, can be summarised as follows:

i. Libya independence was gained on 24 December 1951. The new state was initially known as the United Libyan Kingdom and later as the Kingdom of Libya, and until independence was one of the poorest nations in the world. This situation began to change following the discovery of oil and gas at the end of the 1950s.

ii. Increased revenue from oil led to a migration from rural to urban centres and dependency on the Government in general. In 1969, a military coup was carried out on the monarchy and this regime stayed with many faults for 42 years, until its fall on 20 October 2011, following the uprising of youth on 17 February 2011.

iii. Islam plays a major role in the lives of the Libyan people, and can be argued to have interconnected network of ties in a family, work and society.

iv. Libya's record in higher education is good, and currently, it has eighteen government universities, of which the Universities of Tripoli and Benghazi are the two oldest and largest in Libya.

v. Due to the size and structure of the population in Libya being relatively small, this has resulted in a low supply of manpower for economic development, which has led to dependence on expatriate workers to meet the requirements of ambitious development plans. In Libya, the population growth has decreased and this has led to a low demographic proportion of young people with only 32% of the population being less than 15 years old. The most important issue for future industrial development in Libya is therefore, to develop solutions to remedy the impending shortage of skilled labour.

vi. One of the problems is the issue of the unemployment of graduates, which has occurred as a result of the recruitment of employees into government work, as well as the mismatch between the graduates of vocational and technical training and requirements of the Libyan manufacturing industry. Technical and vocational education has advanced markedly and currently there are about 200 centres and institutes of training.

The focus in Chapter 3 will be in the literature used to complete this study and a critique of that literature.

# Chapter 3. A review of the literature

## 3.1. Introduction

The importance of training aimed at boosting an organisation's performance, expansion and profitability have long been acknowledged and the need to incorporate the training element in any organisational climate is increasingly emphasised (Cosh et al., 1998; McClelland, 2002; Ghufli, 2012). As such, there is a high demand for organisations to invest in training employees according to the changing needs of the labour market, a task at hand, its vision and, on the macro level, the changing social and economic circumstances. Therefore, training is seen as a vital part of organisational development (Tung-Chun, 2001). Nonetheless, training needs to be appropriately tailored to achieve expected results and this can be done by considering the effects on the behaviour, knowledge and expertise of the targeted users. A successful and influential process is, therefore, dependent on identifying training needs.

As stated previously, The TNA is regarded as the most important phase in ensuring the effectiveness of planned training (e.g., Goldstein and Ford, (2002); Salas and Canon-Bowers, (2001); Tung-Chun, (2001). Nevertheless, effective training is not an easy task as there are various elements that must be considered when deciding on, designing and subsequently implementing a training programme. This chapter includes eight sections; definitions of training, identifying training needs, the theoretical framework of TNA, role of TNA and training effectiveness, different TNA models, sources of data to identify needs, techniques used in conducting TNA and previous studies. Therefore, this chapter highlights the key points from an extensive review of the literature on TNA in order to provide the conceptual background for the empirical work. Also, this chapter draws upon studies that cover the nature of training and development issues facing the organisations in different countries, particular developing.

## 3.2. Definitions of Training

Training can be defined as "*a planned process to modify attitude, knowledge or skill behaviour through learning experience to achieve effective performance in* *an activity or range of activities. Its purpose, in the work situation, is to develop the abilities of the individual and to satisfy the current and future needs of the organisation*" (Manpower Services Commission, (1981:62) cited in Wilson, (1999:4). Another definition was put forward by Nadler (1980), considered as the father of HRD, who shares a similar understanding of the concept of training as the above but further explained that training can also be used as an intervention to deal with a performance problem and can take various forms: interactive, based on experience including discovery learning, computer-based instruction and teleconferencing. However, oblivious to the form it takes, any training scheme ultimately aims at the mastery of expertise, skills, attitudes and the ability to perform efficiently in the set tasks at work. Triner et al. (1996) drew our attention to the fact that training should only be viewed as a means and not as an end.

Since different research papers rely on their own definition of training, a more recent definition is deemed necessary to see whether over time this concept has undergone any major changes. Thus, according to Arthur et al. (2003:236), training methods are referred to as "*capable of and indeed are intended to, communicate specific skill, knowledge, attitudinal, or task information to trainees*". Similarly, Goldstein and Ford (2002) conceptualised training as an efficient approach to learning and development with an aim to enhance the effectiveness of the individual worker, his team and the organisation in general. Hence, taking the aforementioned but few definitions into account, it seems safe to conclude that in general, although there might be minor differences perhaps pertaining to the topic being researched which could be context-based, the traditional definition of training pertaining to employee development seems to still be relevant in the current era. Anderson (1994:23) has provided a summary of definitions stating: "*training is about helping people to learn and to work more effectively*".

However, since the 1980s it has been noted that some attempts have been made to differentiate employment development from training (Fitzgerald, (1992); Pace et al., (1991). Training is conceptualised as a planned effort made by an organisation to ensure a smooth learning of particular knowledge, skills, or behaviours that the workforce needs to possess to meet the requirements of their job position (Goldstein, 1993) whereas employee development is not necessarily limited to any specific job (Noe et al., 2014).

### 3.4.1 Training cycle:

Organisations perform training needs analyses and consider them an important first stage in the systematic training cycle (see Figure 1) because it provides crucial information about the potential recipients of proposed training, their needs and content of the planned training programme (Donovan et al. 2001).

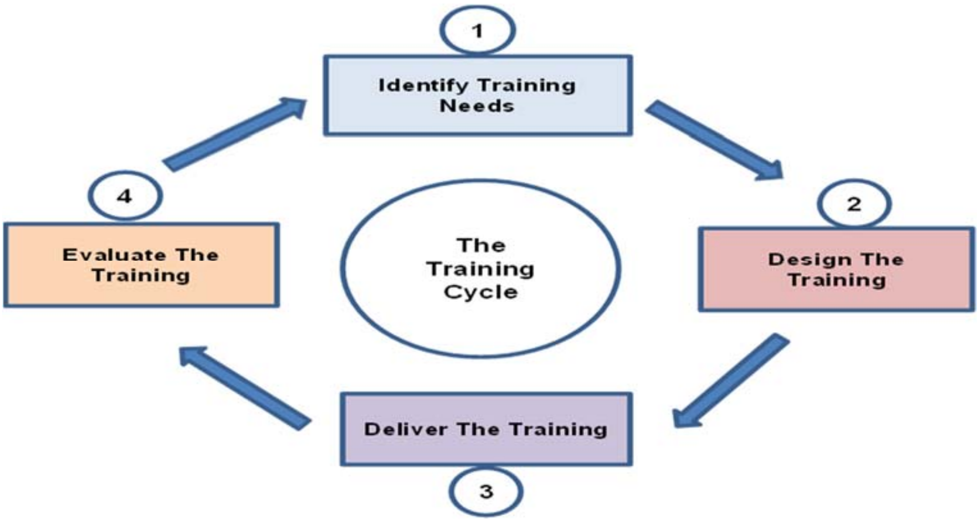


**Figure 3-1: Systematic Training Cycle**

Source: Prepared by the researcher.

The training cycle typically involves the four-step process, its begins with an identification of training needs. The outcome of this initial step ensures that appropriate types of training programmes are selected. This step is also important in terms of developing proper objectives and training methods, and employing the right trainers. Following this initial step, which leads directly to the designing of the training, step three is carried out. Finally, an evaluation process is undertaken, which involves reviewing all other steps and ensuring that training needs have been met and all objectives have been achieved.

Anderson (2000:9) has asserted that "*needs assessment is the starting point in the training process. It is the phase during which an organisation's needs are identified, forming the foundation of an effective training effort*".

It is generally recognised that the first important phase in training cycle is to determine the needs within an organisation in order to prepare training programmes that cover specified training needs.

## 3.3. Identifying training needs

Identifying training needs is of utmost importance to any organisation and are usually based on an in-depth examination of a company's objectives, staff, production, raw materials, and costs, among other factors (Brown, 2002). To ensure that organisations benefit from their training investment, the approach adopted towards training must be primarily systematic, underlying a series of steps that organisations need to take with regards to training and developing their staff. In fact, the identification of training needs is a core ingredient necessary for the successful completion of the overall training process (Som and Nam, 2009) and in its absence it is difficult to carry out a firm diagnosis aimed at determining whether this process was properly designed (Anderson, 1994; Bowman and Wilson, 2008; Goldstein 1993). According to Miller and Osinski (2002), a "need" can be conceptualised in various different ways but in general, it refers to a gap between the existing situation and what is currently needed, as well as future requirements. By its very nature, training needs diagnosis mainly involves information gathering and its analysis. Moreover with accumulating literature on the subject, some researchers also suggest that a range of investigative techniques is necessary to improve its effectiveness (Leat and Lovelle, 1997).

The importance of identifying training needs cannot be underestimated, given some significant empirical findings on this subject. For instance, research highlighted that organisations need to be sensitive to female requiring different training needs to male, perhaps as a result of existing cultural realities. Ibrahim (2004:357-358) explained the role of religion and Arabic culture in this issue by saying: "*Islamic societies are of a patriarchal nature with dominance for men who are responsible for the maintenance of the family and providing its economic needs. Religion-wise, wives ought to obey their husbands even if the husbands' orders are against the desires and will of the wives. Women's domestic functions as wives and mothers are regarded as their sacred role in the society. These functions take precedence to any other interests*".

Also, employees occupying different positions in the organisation would report different training needs based in the work situation in their daily life including their job requirements.

## 3.4. Theoretical framework of TNA

Similar to the high importance attached to the identification of training needs, there is another key element that is often considered as the most important initiative to take to capture the effectiveness of training, namely the TNA. This statement is grounded in the research work of many training theorists (e.g., Goldstein and Ford, (2002); Salas and Canon-Bowers, (2001); Taylor and O'Driscoll, (1998); Reid and Barrington, (1997); Nelson et al., (1995); Wright and Geroy, (1992); Ostroff and Ford, (1989); McGehee and Thayer, (1961). There are four stages in the systematic training cycle that characterise the overall training process: identifying training needs, training design, training delivery and training evaluation (Bowman and Wilson, 2008). TNA lays a strong foundation for a successful result. Armstrong (1996: 536) states "*training needs assessment is partly concerned with finding the gap between what is happening and what should happen. This is what has to be filled by training*". In doing so it indicates the direction of the training, personnel to be trained as well as the training content (Holden, (1991); Wexley and Latham, (1991).

Together with its main purpose of ensuring that companies do not lose out on their training investments, being one of the first steps of the training process, TNA also helps to limit any potential errors that could have been made in the training programmes (Elbadri, 2001). Nevertheless, as highlighted by Arthur et al. (2003) and Mouzakitis (2009), research on training with a specific focus on TNA is relatively limited and not enough is available in the literature, hence providing further support for the conduct of the current study to address this issue. Furthermore, using a theoretical framework in an endeavour to develop a better understanding of TNA, researchers are now also interested in discovering various forms of TNA such as training evaluation and training analysis (Mathews et al., 2001). However, over the last three decades there have been concerns consistently raised by both training theorists and researchers with regards to the tendency of organisations to rely heavily on ad hoc training decisions and much less on the adoption of systematic approaches to TNA, with a similar situation prevailing at present. In addition, according to surveys on how TNA is being practiced, recommendations put forward by researchers are not yet being thoroughly considered in actual practice in order to bridge the gap between theoretical assumptions and work undertaken in practice (Taylor and O'Driscoll, 1998). Sharing knowledge between research and practice it's can be rewarding to mutual benefit. Latham (1988) explained that this situation has arisen as a result of both theory and research failing to influence practitioners.

A TNA is used to assess the gap between the knowledge, skills and attitudes currently held by employees, against those required to be held; it identifies the improvements required to meet an organisation's objectives (Truelove, 2001). Training needs arise at three levels: organisational, task and individual analysis (Blanchard & Thacker, 2003), and can be identified by answering questions: see below Figure 3.2.

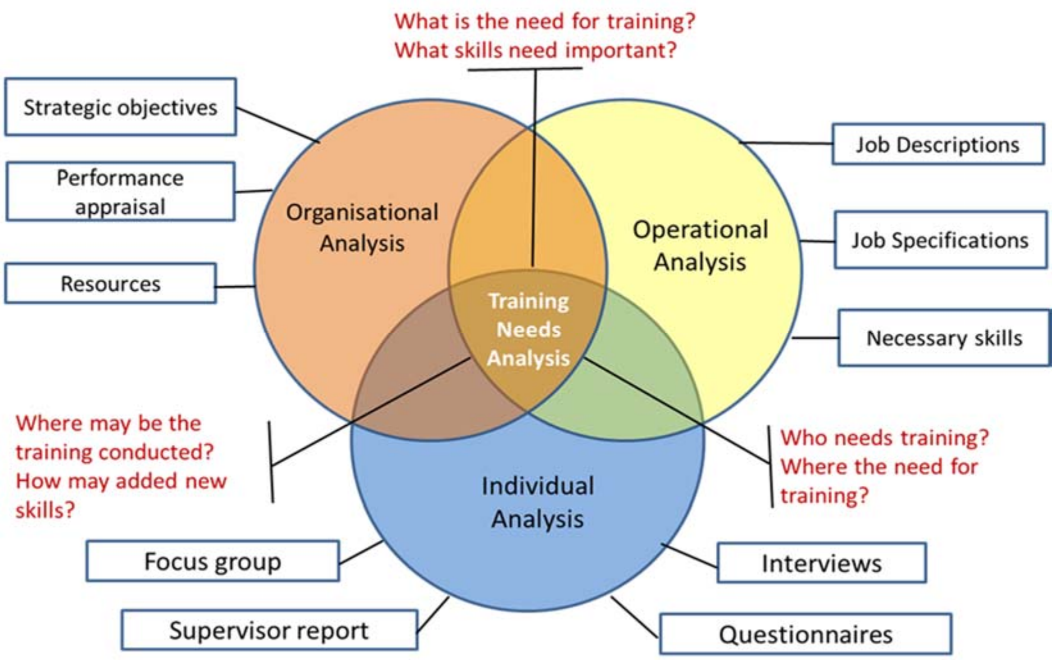


**Figure 3-2 TNA process**

Source: Prepared by the researcher

This Figure 3-2 shows the concept of TNA, which aims to statement the questions that must be answered when there is a need for training. Also the Figure shows three levels of assessment: the first level is organisational analysis, which focuses on identifying where in the organisation training is needed; the second level is task analysis (knowledge, skills and abilities), which aims to identify the content of the training; lastly is individual analysis, which determines how well each employee is carrying out the various tasks that make up their job. Data gathering is a key step in TNA. According to the Figure, these methods and techniques can use by analysts to collect data for TNA purposes and to identify training needs.

### 3.4.1. Definitions of TNA

After reviewing the literature, there is a considerable amount of research published in relation to various definitions of TNA and contexts in which it has been used (e.g., Iqbal et al., (2012); Gupta et al., (2007); Altschuld and Lepicki, (2010); Kaufman and Valentine, (1999); Cekada, (2010); Armstrong, (1996); Tao et al., (2006). Each study developed an operational in-depth definition of TNA, using a theoretical perspective embedded in the practical setting in which it has been used and empirically explored. Therefore, can say that the main objective strategic of TNA, which is to identify training needs as currently exist or will exist at a future time. Table 3-1 below are a few examples of previously cited definitions of TNA:

**Table 3-1: TNA definitions**

| No. | Definitions | Authors |
|---|---|---|
| 1 | "*A training needs assessment identifies specific problems within an organisation by using appropriate methods of gathering information (such as surveys, interviews or observations), determines which of the problems requires a training solution, and then uses the information to design training interventions that solve the original problem.*" | (Rossett, 1987:3). |
| 2 | "*Training needs assessment involves the study of ways of designing and developing instructional and informational programmes and materials after the performance analysis has determined that training or informational materials are indeed appropriate.*" | (Tracey, 2004: 457). |
| 3 | "*The first step in the training process" and it is "designed to identify performance gaps that can be remedied by training. Also, it a process which "consists of surveillance, investigation and data analysis.*" | (Tracey, 2004:678). |

| | | |
|---|---|---|
| 4 | "*Is a methodical investigation and analysis into an organisation's current and desired performance levels, focusing heavily on the ability of its staff and their support network. A TNA will help an organisation to target specific business issues through designing bespoke training solutions.*" | (Denby, 2010:148). |

Based on the above, there are many definitions of TNA, although collectively there is overlap and an underlying systematic effort aimed at collecting data to assess performance problems and to decide whether there is any possibility these could be resolved through training activities (Chiu et al., 1999). As far as this study is concerned, consideration has been given to the choice of label to refer to TNA prior to the conduct of the research. Since the term *Training Needs Analysis* is usually recognized as the most commonly used in literature and it is also believed to be easily understood by training professionals across many organisations, 'needs analysis' rather than 'needs assessment' is the term used in the current research.

In line with the above, it is widely recognised that regardless of the various definitions given to TNA, all are usually similar rather than different. However, it is also difficult to ignore that the literature does certainly point to TNA as a rather complex process (Gordon, 1973). In an endeavour to clarify this issue, a study was conducted by Bowman and Wilson (2008) to probe into potential existing differential and perhaps even similar understandings of TNA among three separate groups, with the task to design and deliver training sessions: passenger transport managers, training managers in charge of TNA responsibilities and training consultants who engage in TNA investigations. Using a mixed-method strategy (i.e., data collected from questionnaires and individual interviews), it was found that overall there are discrepancies with regards to what the organisation deems necessary to consider in order to address any gap in performance levels and the individual himself who is usually any employee. This study points to existing cases whereby the individual employee and the organisation as a system are not in agreement with regards to what each perceives as an area which requires a training intervention, as well as the type of intervention which might be best suited for a boost in performance level. For instance, business needs can be incongruent with individual needs despite the fact that each has an ultimate aim to render the TNA purposeful. As such, based on the above study, it would be safe to conclude that although it is essential to have a clearly defined concept of TNA that an organisation can rely on, it is also as much important to ensure that needs are identified across all levels in the organisation and clearly communicated throughout the TNA process. This proposition finds support in a statement made by Kenney and Reid (1986:69): "*the quality of the training can be no better than the quality that the analysis permits*". In other words, the training process has to work in parallel with the feasibility criteria of the analysis while ensuring that everything is carried out clearly and is transparent across all levels in the organisation.

### 3.4.2. Needs Assessment and Needs Analysis

Despite *needs assessment* and *needs analysis* being interchangeable terms in literature, with many theorists agreeing that they share many similarities, Kaufmann et al. (1993) maintain that they are also characterised by several differences. They also state that while the aims of needs assessment are three –fold- finding and focusing on performance gaps; prioritising them; as well as choosing to address what one considers to deserve the most attention; needs analysis, on the contrary, is a process that mainly strives to explore the reasons for any current performance gaps. Therefore, while *needs assessment* primarily concentrates on identifying and prioritising needs, a *needs analysis* should work on the identified need by breaking it down into different separate components which could then lead to the solution requirements (Watkins et al., 1998). A needs assessment is a systematic process for determining the gap between the current performance and desired performance. While the training needs analysis is to determine what is required for the individual from knowledge and skills. Hence it could be implied that whilst *needs assessment* and *needs analysis* overlap in terms of an ultimate aim of addressing performance gaps, they can still be slightly different with regards to what each chooses to be the focal concern that needs some form intervention as well as the extent to which the latter needs to be undertaken.

Kaufman and Keller (1994:14) conceptualised "*needs analysis*" as "*the process of determining the reasons and causes for a need so that appropriate interventions may be identified and later selected*". Similarly, Brown (2002) defined 'needs assessment' as a process involving data collection over a long period of time aimed at identifying specific training needs of an organisation so that this can influence the development of training practices to aid the organisation achieve its objectives. Therefore, from the above definitions of each concept, it would be safe to conclude that needs assessment and needs analysis can also be interrelated. Further support comes from the work of Watkins et al. (1998) and Iqbal et al. (2012) who posited that training needs assessment and training needs analysis are two processes that should be carried out simultaneously, or even performed as a single process. Currently it is recommended that the training process should incorporate both an assessment and analysis of training needs (Elbadri, 2001; Rossett, 2009; Truelove, 2001). Furthermore, such an attempt can help to identify the unique developmental requirements of staff across different levels and positions in the firm such that their training needs are adequately addressed (Effah, 1998).

Leigh et al. (2000) emphasised the importance of assessing and analysing needs since it helps to build a strong platform on which specific HRD intervention procedures (perhaps including training practices) can be identified to ensure a successful outcome. According to Desimone et al. (2002) the process of HRD needs analysis consists of three levels of needs that have to be assessed: the needs of the company; the skills, knowledge, attitudes and functional tasks of individual employees; as well as departmental needs (Wilson, 1999 and Harrison, 2000). In comparison to McGhee and Thayer's (1961) model, the above seems to be more sensitive to the intricacy of needs assessment with more emphasis on a harmonious relationship between the organisational needs and personal needs. Also, Desimone et al. (2002) distinguishes between the needs of the organisation as a system and specific needs pertaining to a department that also forms part of the organisation. As such, it could be implied that this model considers the organisation as a system but perhaps also with sub-systems such as various departmental sectors whose needs are also required to be compatible the company as a whole. However it is important to note that often the majority of organisations do not complete this whole process by considering all the four levels and rather only limit themselves to individual employees needs (Kerr and McDougall, 1999). In fact, there is increasing evidence suggesting that needs analysis is not usually one of the priority fields catered for in the industrial sector (e.g., Anderson, (1994); Smith, (1999); Bhatta, (2002) and

Budhwar, et al., (2002), especially in small firms (Sadler-Smith et al., (1998); Kerr and McDougall, (1999); Vinten, (2000); Hill and Stewart, (2000); Sadler-Smith and Lean, (2004). Many reasons have been put forward to account for this phenomenon but one reason in particular which is of direct relevance to the current study is the fact that needs assessment does not seem to benefit from a lot of support as a result of HRD professionals not being able to stress its undeniable importance to senior management (Reid and Barrington, (1994); Wilson, (1999); McGoldrick et al., (2002).

### 3.4.3. The processes of TNA and its design

Iqbal et al. (2012) suggested that comprehensive schemes underlying the processes of the TNA would involve the following key elements that would also influence the process as a whole: 1) establishing the 'why' of TNA; 2) determining the 'what' of TNA (inputs and outcomes); 3) deciding 'when' to conduct a TNA; 4) deciding 'where' to carry out a TNA; 5) clarifying 'who' decide/s if a TNA needs to be performed and 6) selecting 'how' to conduct the TNA. Each will be briefly discussed below.

#### 1) *Establishing the 'why' of TNA*

TNA being a complex process (Gordon, 1973) could be the main reason why managers view it as a difficult and time-consuming task rooted in research work. There is evidence suggesting that they tend to show a preference for action rather than research and hence simply focus on performance analysis instead of engaging in needs assessment (Iqbal et al., 2012). To avoid this, and with an aim to reinforce the importance of TNA, Desimone et al. (2002) suggested a few measures such as emphasising individual's performance deficiency needs with less focus on group or organisational performance, beginning with training needs if the latter has already been identified, administering appropriate instruments for data collection on trainees' needs and using both soft and hard data to assess performance.

#### 2) Determining the 'what' of TNA (inputs and outcomes)

In terms of TNA inputs, every training programme should be sensitive to trainees' previous knowledge (Prokopenko, 1987) as any data collected can help separate training from non-training needs. This contributes to limiting the training cost as well as enhancing training effectiveness (Iqbal et al., 2012). By considering trainees' prior knowledge, it can help them master new skills and improve any existing inappropriate ones (Pineda, 2010). Moreover, trainees' attitudes towards learning is also another important input that requires due recognition in the TNA process as it has the potential to affect the training effectiveness (Desimone et al., 2002). There are various approaches to TNA when considering employee initiatives and employer-dominated methods (Mathews et al., 2001). Hence according to Desimone et al. (2002), it is of prime importance to give due consideration to the receptiveness of employees with regards to their training scheme as this could determine the extent to which they embrace its usefulness so the latter could positively affect training effectiveness. One of the key outcomes of TNA is the training topic, helping trainers to prepare for training topics that are usually identified following short interviews of trainees (McClelland, 1994a).

***3) Deciding 'when' to conduct a TNA***

The literature identifies two points in relation to the time factor: line and long-range (Greig, 1997). While training needs to reflect the gap between the desired and current level of performance, long-range training needs consider the discrepancy between the projected desired outcome and the level of performance in the actual situation (Iqbal et al., 2012). It is important to note that although many organisations invest significantly in planning production, marketing and finance, few have engaged in making plans for training or human resource development following an evaluation of the current training needs (Greig, 1997).

***4) Deciding 'where' to carry out a TNA***

Generally, most organisations rely on the support of needs assessment centres to strengthen and even improve their human resource (Green, 2000). This aid is usually obtained from what is commonly referred to as the in-house team of training professionals or even through outsources such as consultants, advisors, training professionals and training organisations (Iqbal et al., 2012).

***5) Clarifying 'who' decide/s if a TNA needs to be performed***

According to management scholars there is a range of different formal and informal sources to meet this purpose such as senior management, the line supervisor (Mathews et al., 2001), trainers (Chiu et al., 1999) and trainees (Bee, 1994) all viewed as formal options, with customers being considered an informal source (Brown, 2002). Customer feedback is certainly considered to be as important as any other source in relation to defining and clarifying TNA (McClelland, 1994b).

***6) Selecting 'how' to conduct the TNA***

Ghufli (2014) explained that a generic TNA process is characterised by pre-assessment and assessment. The former involves an appraisal of the situation followed by a method evaluation in an endeavour to choose the most relevant ones. The assessment phase involves data collection, its analysis, feedback to the client, review of data, and follow-up activities to proceed to the implementation phase (McClelland, 1993). As such, current research on TNA advocates the use of a variety of data collection instruments embedded in a TNA methodology that is realistic, feasible and reflects the job as it is actually carried out on a daily basis (Pineda, 2010). In fact, there is a set of different methods used to collect data in TNA research, such as a review of references in cases where factual information is needed about performance; questionnaires in order to familiarise oneself with the topic under investigation; interviews for when a detailed understanding of the training is required; focus group discussion in situations where the training is based on team work, and observation when training relates to simple skills (McClelland, 1994a). The aforementioned methods, along with some others, will be further discussed in the next chapter that looks specifically at the methodology of TNA research.

#### 3.4.3.1. Design

As far as the design of TNA process is concerned, the training programmes must satisfy both organisation and human assets and be based on organisational, operational and individual analysis while ensuring the use of appropriate data gathering techniques across all the three levels (Stanley, 2002). In line with the aforementioned processes of TNA, organisational analysis also relates to 'where' within an organisation the focus on training could and should be placed. Operation analysis emphasises the nature of the content of training to ensure that an employee is in a good position to perform effectively. To have a better understanding of the individual analysis level, two terms were introduced in the literature: summary man analysis and diagnostic man analysis. While the former relates to the assessment of the ability of the employees at work, the latter investigates the levels of skills, expertise and attitudes involved when doing the job (Jamil, 2006). As such, one could argue that by paying attention to the different factors affecting employee performance, the above ties in mostly with the four level TNA as it goes beyond looking at individual and organisational analysis. This approach seems to add an extra layer to the model, which could contribute towards improving organisational performance, given its sensitivity towards needs identification and assessment. The work of these authors is very influential and also highlights an existing interrelationship between all three levels, each bringing its own contribution to the design of the TNA process.

## 3.5. Role of TNA and training effectiveness

Miller and Osinski (2002) stated that as a major component of TNA, needs assessment is considered as the first step in the process of designing a training and development programme. It creates a platform on which instructional objectives, the choice and model of instructional schemes, their implementation and subsequently the assessment of the training practices put in place are all determined accordingly. It was further explained that the main role of a TNA is to accurately detect performance requirements/needs in a company with an aim to invest resources in specific areas that need to be improved; often the ones that are functioning in parallel with the organisational mission directed towards an increase in productivity while simultaneously offering products and services at a high standard. Moreover, Olivas (2007) further emphasised the importance of the role played by TNA by suggesting that when a training programme is implemented based on needs assessment findings, such an attempt greatly help to gain valuable information that can guide an organisation on designing a needs assessment system that can provide effective outcomes.

Baldwin and Ford (1988) defined training effectiveness as the extent to which a company's staff is able to gain a new skill and apply or transfer it into their work. TNA has been largely viewed as the most important phase that can lead to planned training being effective (Carlisle et al., (2011); Elbadri, (2001); Ferdous and Razzak, (2012). This statement also finds support in the work of Tung-Chun (2001), further reinforcing the idea that a strong relationship between TNA and training effectiveness exists and should be acknowledged. However, the above author also highlighted that although increasing attention is given to the importance of considering employees working in both small and medium size organisations, as far as research is concerned on the effectiveness of training practices within these organisations, evidence shows it remains very limited. Empirical evidence is scarce in relation to large industries, thus more research must be carried out to ascertain whether there are differences in attention given to employees based on the size of company. Unfortunately, the limited studies that have attempted to address this issue by filling in existing gaps in knowledge regarding TNA and training effectiveness are all restricted to Western societies (e.g., Cosh et al., (1998); Marshall et al., (1995); Westhead and Storey, (1996). As such, current literature has drawn our attention to the need for future research to make use of different perspectives to expand our understanding of this specific area (Westhead and Storey, 1996).

Desimone et al. (2006) argued that the concept of training effectiveness is actually “relative,” but only in cases where training success is not measured solely based on a single construct such as productivity or work satisfaction. Nevertheless, it is difficult to ignore that training effectiveness is undeniably influenced by the effective nature of the TNA (Agnaia, 1996), which is in turn depends on a successful needs assessment in line with the organisation’s goals and objectives (Iqbal et al., 2012).

## 3.6. Different TNA models

Taylor et al. (1998) classify the TNA models into two main groups: the organisation, task and person analysis (O-T-P) approach and the performance analysis model (PAM). The O-T-P model has gained wide recognition from academics, which has, in turn triggered the development of many other related models. On the other hand, the PAM model is popular among practitioners and founded in the identification of gaps between anticipated and current performance as needs for training (Holton, et al., 2000). Another key differentiation between the two is that in contrast to the performance analysis model which does not take any action plans or training design until the occurrence of the problem, while the O-T-P model adopts a more strategic approach to organisational missions with specific attention to needs for the future (Ghufli, 2014; Taylor et al., 1998).

Based on a recent review of the current literature, there are various TNA models that have been used with the majority of them introduced and implemented in Western societies (Atoki, 2013). Nonetheless, according to Goldstein (1993) TNA models have undergone relatively minimum changes since the last three decades despite the obvious progress witnessed in relation to the development of more relevant and up-to-date frameworks for conducting training design, delivery and assessment. Similarly Leigh et al. (2000) also recognized the existence of over ten needs assessment models in the literature over the past 30 years with each characterised by its different levels of concentration. Thus, models are usually differentiated along the line of the ends or means that needs to be formally considered and it is important to identify the target outcomes as well as the best approach to be adopted in order to ensure that these outcomes are achieved.

As part of the O-T-P analysis, the model of Goldstein and Ford (2002) is chosen as it is arguable that it is the most comprehensive of all models since it incorporates both the initial steps in the TNA process and the commonly known three levels of analysis. Under the performance analysis model, two models will be considered: Olivas's, (2007) model and Blanchard and Thacker's, (2003) model.

The first model is chosen given that it can indicate a crucial *"purpose in helping organisations approach their own needs assessment process in a more systematic and effective manner"* (Olivas, 2007:38). The model of Wright and Geroy (1992) is believed to support the importance of key elements such as managerial strategy, and philosophy and culture, all of which are integrated in organisational TNA decisions. Blanchard and Thacker's Model (1999) inspires the current study as the latter also identifies relevant strategies, methods, and practices that could be more appropriate in smaller organisations in the process of implementing their training model. As such, Blanchard and Thacker's (2003) Model caters for the TNA of companies of different sizes. Overall it has been argued that the PAM model is to some extent an advance over the O-T-P model as it strives to link any poor work performance to the potential outcome of the influence of various different factors, rather than purely focusing on the use of training as a remedy for deficits in job performance (Clarke, 2003).

### 3.6.1. The three levels of (O-T-P) analysis

The O-T-P three-level approach to needs assessment was originally put forward by McGehee and Thayer (1961) and has long been viewed as the mainstay framework that guides the conception of needs assessment in scholarly literature (Holton et al., 2000). In fact, the three-level framework has influenced the majority of the models developed following the introduction of O-T-P, in both academic literature and the practical industrial setting (Sultana, 2013). This typology has undergone minimum change over the last 30 years, and based on systematic reviews of TNA in empirical literature and training manuals (e.g., Goldstein, (1993); Tannenbaum and Yukl, (1992); Wexley and Latham, (1991) there has been an ongoing tendency to conceptualise needs analysis with specific reference to the O-T-P framework (Taylor, et al., 1998).

McGehee and Thayer's three-level conception of needs analysis have triggered a considerable level of interest since its proposal. Essentially, they observed that training and developmental needs assessment were both purely focused on the "person" or "task" level, with little consideration given to organisational goals. As a result, the above authors came up with a model that they believed had the potential to integrate needs analysis at the '*organisation', 'task'* and '*person'* level with an aim to create an effective training approach (Leat and Lovell, 1997). Despite the fact that disagreements across different departments and levels are somehow inevitable, especially in industrial settings whereby there is little control of the learning process leading it to be mostly self-managed, there is further support for the idea that the aforementioned three levels (organisation, task and person) can be integrated (Reid and Barrington, 2004). It is also worth emphasising that all levels are important as the complement each other in such a way that it gives rise to a holistic mechanism in which the organisational level approach works in parallel with a job and person-level analysis (Sultana, 2013).

Interestingly, earlier models of needs analysis are mainly, if not solely, focused on a job or business level (Taylor, 1991) and only since the last two decades have more recent approaches emphasised the need to incorporate different analytical levels that can touch upon the global organisational level, departmental and job level while also being sensitive to any issue encountered on any level. This process is also carried out while ensuring that everything is geared towards the individual, hence displaying the ultimate aim of considering individual needs that could be key to a boost in organisational performance (Kenney and Reid, (1986); Shiryan, et al. (2012). In fact, the individual along with his/her needs and attributes has been given considerable attention according to Sultana (2013). Wills (1998: 27) explained that conflicting interests within the organisations are often inevitable and thus, "*needs identification has to balance corporate demands, policies and strategies as well as individual and organisational requirements*". In his opinion, an ideal strategy would be to combine top-down and bottom-up approaches: that is, the focus should definitely be on corporate strategies and locating business and departmental needs that would guide the selection of appropriate training activities; but, equally important would be to not neglect the identification of individual and development needs by taking into account the single employee.

Therefore, on a summative note, the O-T-P model of TNA by McGehee and Thayer (1961) can be viewed as a system of three analyses: organisation analysis, task analysis (sometimes referred to as `operations analysis'), and man analysis (now referred to as `person analysis') as clarified by Taylor et al., (1998). Inspired by the well-known tripartite-level of TNA, the O-T-P model adopts a very systematic approach to needs analysis and this has allowed decisions about training needs to be taken on the basis of integrating macro into microanalyses. In other words, the above model engages in analysis across various levels moving from an emphasis on one individual employee (micro level) to the whole organisation as a system (macro level). In doing so, it allows the model to capture even minor changes within the organisatioal setting which could have an impact on training effectiveness. Hence, such an attempt is strongly founded in the evaluation of training needs to satisfy organisational and task/job needs in line with the specific needs of the individual employee (Clarke, 2003).

#### 3.6.1.1. Goldstein and Ford's model (2002)

This model consists of five levels of analysis: organisational support, organisational analysis, requirement analysis, task analysis, and person analysis

(Goldstein and Ford, 2002). Similar to, or perhaps influenced by the O-T-P model, Goldstein and Ford's model also incorporates the three main levels. However, it also differentiates itself from other models as it stresses the need to work towards the successful implementation of TNA. That is, as part of the first level of the model, the needs analyst must work in collaboration with the organisation by establishing a good rapport with top management. Similar to other models, in the second phase, the needs analysts have to pay particular attention to aligning training needs with organisational needs in parallel with the company's mission. As such, they must explore the multi-faceted nature of the organisation usually shaped by its goals, resources, provide training climate, as well as internal and external difficulties which might act as potential barriers to training programmes. Below is the diagram of this model with its five levels of analysis.

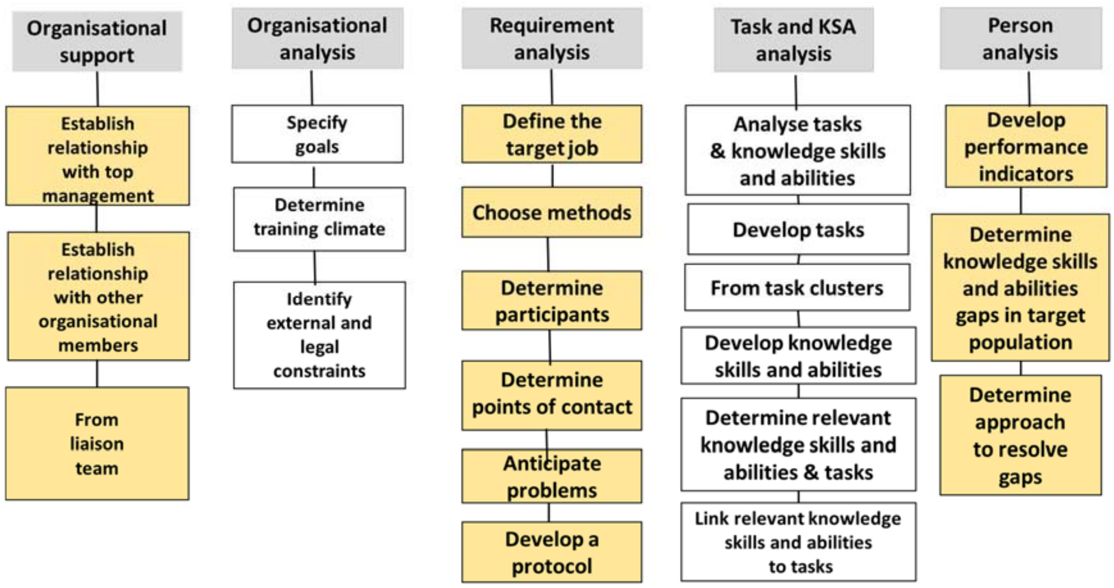


**Figure 3-3: Goldstein and Ford's (2002:35) Model of TNA**

Goldstein and Ford (2002) emphasised the importance of preparing the groundwork in order for the TNA to be successfully conducted before proceeding to the next level. Must gain the support of the organization for an analyst. This entails developing a rapport with top management to clear the path for the TNA process; a lack of support from top management can be one the main barriers to successful TNA. As part of the requirement analysis, there are various steps that authors have proposed to help analysts to be fully equipped for the next levels; for instance, defining the target job with careful consideration of its place within an organisational context; identifying the most effective data collection tool; choosing the most suitable method to collect data; locating the potential participants who could provide the data and how they could be invited to participate; determining points of contact within the firm to facilitate data collection; planning ahead with regards to potential problems and their solutions, and designing a standard protocol to be used during the data collection process. From an empirical perspective, Chiu et al. (1999) looked into TNA studies from the past 25 years and concluded that TNA has mostly been carried out at the organisational level, with very few studies identifying TNA based on personal needs analysis. On the other hand, in developed countries, there are a few studies supporting the implementation of TNA methodically and across all levels (Amos-Wilson, (1996); Agnaia, (1996); Elbadri, (2001); Jamil, (2006). In line with current research, it could be argued that it might be more beneficial and appropriate to consider the implementation of TNA across all levels in order to be sensitive to any issues that could only be captured if a holistic approach is used. Moreover, it could also allow a comparison of the intricate nature of all different levels in terms of needs assessment as well as training effectiveness. Perhaps such strategy would contribute towards a more in-depth understanding of TNA in Arab industrial sectors.

***1) Organisational analysis***

To determine where the emphasis for training could or should be laid, McGehee and Thayer (1961) proposed that organisational analysis investigates the aims, goals, resource needs and level of performance of a company. Organisational analysis is also linked with taking strategic company directions into account; for example, deciding if managers, colleagues and workers work in agreement with training activity, and having a clear idea of available training resources such as budget, time, and training skills (Noe, 2005). The main aim of this level of analysis is to ensure that training is consistent with organisational goals; if training is solely provided merely to fill any gap in the amount of training required in the company or even for developing human resources, it is pointless. Instead, training should be put in place with the ultimate purpose of boosting the performance of the company, thus the business need influencing the training need should be clearly identified (Tang, 2005).

According to Harnisch (2007) in cases where organisational analysis is performed, it also reveals the organisational features that might affect training practices. This level of analysis indicates the departments in need of training and the most favourable conditions for it to be implemented. Moreover, organisational analysis operates in line with anticipated changes in the future regarding for instance, skills needs, the number of employees, and legal matters (Brown, 2002; Harnisch, 2007). There is increasing empirical evidence suggesting that companies currently encounter four competitive challenges touching upon quality (i.e. satisfying customer needs); the global arena (i.e. international growth); a work system supporting high performance (i.e. embracing new technologies and work designs), and also on a social level (i.e. dealing with a varied workforce). All of these challenges require different training (Harnisch, (2007); Noe (2005); Noe et al., (1999). Goldstein (1993) further developed the concept of organisational analysis by considering the degree to which training objectives, positively or negatively, overlap with the goals of relevant groups within the company. Furthermore, Goldstein (1993) recommended that at this stage of analysis it is important to consider training needs beyond actual job requirements as posited by McGehee and Thayer (1961), and work towards the future requirements of an organisation's workforce to satisfy strategic objectives. Finally it is only following the organisational analysis that the other two levels (operational analysis and individual analysis) would be best to be undertaken (Som and Nam, 2009). This emphasis placed on organisational analysis largely overlaps with Goldstein and Ford's (2002) model as the latter also closely considers the need to bridge the gap between training needs on an organisatioal level and the company's mission.

***2) Operational analysis***

Operational analysis, commonly known as task analysis, involves the use of a systematic approach to collect data about a specific job pertaining to the standards required and the resources (e.g. knowledge, skills and attitudes) needed to meet these standards (Brown, (2002); Leat and Lovell, (1997). Tang (2005:21) stated that this level of analysis "*determines the objectives of a job aligned to the organisational goals and seeks to identify the tasks involved in this job along with the competencies needed to perform these tasks*". In other words, task-level analysis endeavours to locate any gaps between tasks based on performance achievement indicators. For instance, in the case where employees do not possess the required skill and ability to undertake a task, and subsequently the company experiences a performance gap, the organisation would then need to provide training to ensure performance is in line with the requirements (McGehee & Thayer, 1961).

Job specifications are usually derived from task analysis and provide an in-depth overview of all identifiable tasks, with a specific focus on the skills and attributes required in order to complete these tasks and determine the standards against which satisfactory performance will be concluded. Regardless of the analytical sources chosen, this level of analysis helps to unravel new expertise, craft disciplines and special skills that are in need of varying amounts and types of training input, especially in relation to activities that are continuously subject to change as a result of increasing technological advances or even other factors in the workplace (Leat and Lovell, 1997). Generally, Goldstein and Ford (2002) conceptualised task analysis as involving four main phases: 1) setting standards against which performance is to be assessed; 2) identifying activities that a job entails; 3) clarifying the requirements of each task to be carried out; and 4) identifying the required expertise for the completion of each task. Following this process, the researcher will be in a position to investigate whether those personnel are well equipped to ensure high work performance (person analysis) (Harnisch, (2007); Brown, (2002).

***3) Individual analysis***

Individual or person analysis involves the process whereby the training practitioner identifies which employee/s in the organisation should be trained. This is usually achieved by determining the level at which each individual worker is performing with reference to the set performance standards, usually through performance appraisals or skill tests (Taylor et al., 1998). Thus, its aim is to find any existing gaps between optimal and actual performance (Tang, 2005). Moreover, this process should revolve around the use of adequate training and developmental strategies that would help the employee score high on all dimensions of performance viewed as being important by the organisational system regarding both the employee’s current and future work roles (Leat and Lovell, (1997); Goldstein and Ford, (2002); Akhorshaideh, (2013); Odusami et al., (2007); Harnisch, (2007). However such an attempt should not be embedded in an assessment of an employee’s quantitative achievements but rather be based on essential potential indicators affecting organisational effectiveness (Leat and Lovell, 1997).

Nonetheless, there is evidence suggesting that individual analysis is largely neglected in industrial sectors despite its undeniable importance and contribution to TNA (Judith, 2002). Table 3.1 summarises the three-level analysis of TNA.

**Table 3-2 Summary of the Levels of Analysis of TNA**

| **Level of analysis** | **Description** |
|---|---|
| Organisational Analysis | Examines company-wide goals and problems to determine where training is needed |
| Task Analysis | Examines tasks performed and KSAs required to determine what employees must do to perform successfully |
| Person Analysis | Examines knowledge, skills and current performance to determine who needs training |

Source: Landy and Conte (2010:319)

### 3.6.2. Performance Analysis Models (PAM)

Magor and Pipe (1970) put forward the influential Performance Analysis model. Performance analysis models are the second group of the TNA models according to classification by Taylor et al. (1998). It has acted as a catalyst in relation to the analysis of performance discrepancies to effect required changes mostly at the individual and small group level (Leigh, et al., 2000). This model is considered as an alternative TNA model which is mainly concerned about identifying and looking into the causes of existing gaps between anticipated and actual performance or in some cases between ideal and average work performance (Blaxter, et al., 2006). Interestingly this TNA model finds its roots in another model proposed by Mishra (2011:2), whose foundation is strongly built on the definition of needs as '*the difference between a goal (or what is expected) and what actually exists*'. Based on this model, TNA relies on the collection of baseline data and locating any performance gaps that need to be addressed by the implementation of an effective design, delivery and training assessment (Mishra, 2011).

This model identifies a training need in situations where performance is considered unsatisfactory as a direct result of a lack of knowledge, competencies or attitudes rather than other factors accounting for poor performance such as available incentives regulating work behaviour, lack of clarity with regards to the company's expectations and performance expectations, barriers affecting performance, minimum support as well as inadequate resources and feedback (Tang, (2005); Taylor et al., (1998). Taylor et al. (1998) claimed that in most cases performance problems are the consequence of the influence of work environment issues that need adjustments in order to improve actual performance rather than changes in relation to the workers' knowledge, skills and attitudes. Unfortunately there is a tendency on behalf of senior management to ignore this, and hence the intervention that is put in place (e.g. training practices) often does not pave the way to the expected performance improvements (Tang, 2005).

However despite the various positive aspects of the Performance Analysis model, with the main attribute being ability to link training needs more unequivocally with expected work behaviour compared to the O-T-P model, some criticism has still nevertheless been levelled against it. For instance, it does not take into account training opportunities for ongoing enhancement of performance by moving beyond the set expected standards to 'improved' and 'innovative' ones. Furthermore, it has also been criticised for failing to bridge the gap between job behaviour and organisationally relevant outcomes (Mishra, 2011). Taylor et al. (1998) also highlighted that this model solely links the causes of performance discrepancies to either limited knowledge/skills or factors pertaining to the work environment and fails to establish a relationship between them both, which is, in fact the most likely possibility in many industrial situations. The above authors also raised concerns regarding this model's lack of consideration regarding the specification of the appropriate ways in which information can be gathered to assess the causes of performance problems and hence deciding whether training is required. According to them, performance analysis demands finely tuned judgements about performance discrepancies and potential reasons behind them but fails to provide the necessary guidance on how those judgements are made with little clarification about the people who should be responsible for making them. Binning and Barrett (1989) drew attention to the limited approach of this model regarding the understanding of the performance domain as it under-emphasises the need to identify which behaviour is essential in order to achieve organisational goals as well as the importance of recognizing the influence of external factors on these outcomes.

#### 3.6.2.1. Blanchard and Thacker's model (2003)

Blanchard and Thacker (2003) put forward a needs assessment model to serve as a framework for undertaking the TNA process. They conceptualise a TNA as a well-established method that could help to identify the needs requiring attention to boost performance in a specific job, or set of jobs, to the required level. Hence they proposed a Needs Assessment Model that could be used to undertake the training needs analysis process.

The model is shown in Figure 3.4 below and consists of three stages: inputs, process and outputs. As part of the analysis process, the input stage is about information from organisational, operational, and person analyses whilst the output refers to the identification of training and non-training needs (Blanchard & Thacker, 2003).

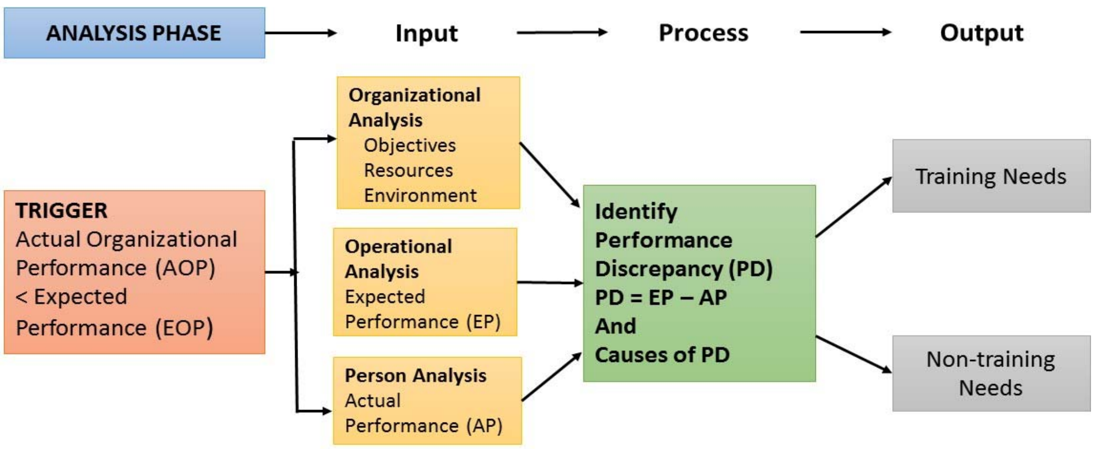


**Figure 3-4: Blanchard and Thacker's (2003: 114) Model of TNA.**

Each stage is described as follows:

***1) Inputs***

The inputs in the TNA process are three separate elements but which are still closely interrelated: an organisation analysis, operations analysis and person analysis.

Consistent with McGehee and Thayer's (1961) definition of an organisational analysis, this model also acknowledges the importance of considering the internal environment of the company (e.g. approach used, structure, policies and procedures, job design) while simultaneously determining the extent to which it satisfies organisatioal goals and objectives, and subsequently the impact of these factors on job performance. This model is also sensitive to identifying any existing barriers that could impede training in any way (Blanchard and Thacker, 2003). Following the identification of any organisational performance discrepancies, an operational analysis is conducted in relevant areas in order to clarify expectations attached to specific jobs so they can be successfully accomplished. Thus, this stage is about looking into the types of tasks to be carried out, the level at which they must be completed (expected performance) as well as the knowledge, skills and attitudes required to perform them. Any constraints are also identified at this point (Blanchard and Thacker, 2003). The next step involves the identification of employees who are struggling to meet their job expectations. This usually takes the form of a person analysis that generally involves an appraisal of actual performance that would lead the organisation to determine which employees are not working effectively and efficiently (Blanchard and Thacker, 2003).

***2) Process***

The '*process*' stage is based on the importance of identifying gaps in performance levels and the comparison of expected performance with actual performance. A performance discrepancy occurs when the job requirements (from the operational analysis) are not reflected in a worker's performance (from the person analysis). However, it could be suggested that not all gaps in performance deserve to be fixed. Therefore, this stage emphasises the importance of taking the right decision with regards to whether or not the company needs to invest in performance improvement (Blanchard and Thacker, 2003).

***3) Outputs***

The outputs of the TNA process revolve around the identification of training needs as well as their priorities. Where a decision is made to tackle performance deficiencies, it is essential to make a distinction between training needs (gaps resulting from a lack of required knowledge, skills and abilities (KSAs) and non-training needs (gaps resulting from other causes) using the data gathered while conducting the organisational, operational, and person analyses (Blanchard and Thacker, 2003). It is only the deficiencies caused by limited KSAs that are given due consideration for training, but while also taking into account that training does not serve as the only remedy to alleviate KSA deficiencies. Other possible solutions also concern job aids, practice, and even job change if necessary. If there is a need to implement some form of training practice, it is then necessary to create a clear and explicit list of the KSAs along with their priorities that would need to be achieved (Blanchard and Thacker, 2003).

## 3.7. Sources of data to identify needs

Based on existing literature on TNA, there is little doubt that there are various sources of data that can be identified and used in order to both identify and assess needs in various industrial sectors (Olivas, 2007). However research has highlighted the need to shift in focus from the importance of needs analysis purely based on descriptive research centred on data collection, to the use of an action research approach (Kemmis, (1988); Revans, (1982). The latter refers to the active role of the investigator as part of a continuous process of defining current and future needs, predicting change as well as putting in place solutions while monitoring effectiveness simultaneously. These outcomes are usually achieved using both quantitative and qualitative methodologies, as well as considering neglected but essential factors such as values, intuitive insights and feelings that could work hand in hand with objective sources of data to inform the analysis (Anderson, 1994).

Moore (2006) explored the issue of TNA data sources and techniques by reviewing literature, aiming to investigate any potential incongruence between the theoretical conceptualization of TNA and how this is implemented in practice. They consider the majority of data sources which are already available in organisations, but would have been originally collected for purposes other than TNA itself. They further highlighted that although the usefulness of the pre-existing data cannot be undermined as they are directly relevant to performance issues, concerns are still raised about the applicability, suitability and accuracy of such data in TNA especially with regards to TNA issues such as identifying the performance problem on an individual level, whether its source pertains to the lack of KSAs, the use of training as an ultimate solution and locating those employees who require training.

### 3.7.1. Gathering data for TNA

Data gathering is the next key step following identifying various sources of data to inform the TNA process. Smith, et al., (1986:66) '*felt that a training needs* *assessment is only as good as the data which is used in the analysis*', confirming the necessity to pay close attention to both the methods and techniques used in data collection. Although there is evidence suggesting that some authors (for example Chiu, et al, (1999); Goldstein and Ford, (2002) did not differentiate between 'methods' and 'techniques', the current study does make a distinction between the two. There are various methods for collecting data from relevant staff members working in industrial sectors such as questionnaires, interviews, observations, group discussions, records and reports and job description analysis (Du Plessis et al., 2010). There are advantages and disadvantages to each of these methods, so it is advisable to use more than one method in the TNA process in order to produce the most reliable results (Jamil, 2006). However, the analysts may need to adopt some of the TNA techniques to carry out job analysis, task analysis, strengths, weaknesses, opportunities and threats (SWOT) analysis, and performance appraisals (Jamil, 2006).

Jamil (2006) categorised TNA methods based on the types of data they yield - quantitative and qualitative data. Alkinani (2013) used the above differentiation to also explain that quantitative data produced by questionnaires and other quantifiable instruments has the potential to emphasise the importance of something (for example, the number of employees lacking a particular KSA and the amount of difference between expected and actual performance). Further, these methods producing quantitative data are also useful in cases where the sample size is large. Therefore, these methods facilitate administration, are simple as well as economical for analysts to rely on mostly when a dimension requires quantification to be better understood. On the other hand, qualitative methods essentially stress the primary definition of something by using methods such as focus groups, on-site observations and reviews of the literature or records. Jamil (2006) stated that these methods should be selected in situations where analysts feel the need to have an in-depth understanding of data initially collected quantitatively. In order to do so, TNA analysts should possess effective communication and interpersonal skills together with empathetic listening skills while also being in a position to engage in both objective and subjective observations (Chiu, et al., (1999); Goldstein & Ford, (2002). Since each method carries both advantages and disadvantages it is usually recommended to rely on more than one method in the TNA process as such an attempt will largely contribute towards the production of the most reliable outcomes (Wagonhurst, 2002; Jamil, 2006).

#### 3.7.1.1. Questionnaires

Survey questionnaires are commonly used as research tools in the field of HRD, especially when embedded in a comprehensive and systematic strategy to identify and assess a company's training and development need (Rummler, 1987). Based on literature the questionnaire methodology for TNA has been thoroughly described (Goldstein and Ford, (2002); Rossett, (1987). Alkinani (2013) argues that designing and administering a survey is a very common way in which training needs are determined. This can usually involve a sample, or group(s) within an organisation, for instance, a questionnaire completed by randomly selected employees and managers although there are also instances whereby it is deemed more appropriate and relevant to include a whole department or the organisation as a complete system in the survey (Botha & Coetzee, 2007). Training needs surveys can be administered using various means but so far it seems that the most common method remains the questionnaire, which is directed towards the employees identifying specific areas in need of additional or future training (Alkinani, 2013).

It is important to note that survey questionnaires provide a cost-effective and reliable way in which feedback of both a qualitative and a quantitative nature can be collected (Preskill, 1991). Moreover, from an ethical perspective, it is of prime importance to stress and ensure that survey data is safe from any form of manipulation, either statistically or in an attempt to favour or refute only special-interest views (*this is directly relevant in the context of industrial sectors where there is the operation of a hierarchical system*). As such, much care should be given to the safeguarding of respondent anonymity at all cost (Rotondi, 1989). Along the same line, the reliability of questionnaire data is highly dependent on the extent to which the questionnaire is adequately designed, administered and analysed (McClelland, 1994a). Designing the right questions and using the right structure is necessary to ensure that any performance deficiencies and subsequently potential training needs of employees can be tapped into (Alkinani, 2013).

As far as this study's research area is concerned, the most common standardized questionnaires used are employee opinion surveys, organisational climate and culture surveys, and generalized training needs surveys. The literature highlights that each of the above has been carefully developed over time and rigorously tested with regards to its reliability and validity. As these types of questionnaire tend to be general in nature they are mostly used in TNAs that have goals and objectives that are less specific. As a result, one cannot disregard the fact that there is always an inaccuracy in the identification process of the training needs for an organisation (McClelland, 1993).

#### 3.7.1.2. On-site observations

The key uses of on-site observations methods are to differentiate between effective and ineffective behaviour, organisational structures and processes as well as conducting job analyses. To ensure the data collected is useful, observations must be undertaken by subject-matter experts who need to have the relevant experience and knowledge pertaining to the job that they are responsible for observing (Jamil, 2006). Thus, the usefulness of this method is only appreciated if the job itself is observable, measurable and can be analysed in terms of what KSAs are required to perform the job effectively (Alkinani, 2013). Bearing in mind that observational data on potential training needs is not robust enough to draw conclusions, it is necessary to blend on-site observations with another quantitative data-gathering method, such as questionnaires, to maximise the significance of the data. When training needs feedback are gathered, observations yield more qualitative information on a macro-organisational level while quantitative information is mostly obtained on a micro- or individual employee knowledge/skill level (McClelland, 1994d). During the observation employees are usually observed when they are fully on task or even actively involved in just parts of their jobs (Botha and Coetzee, 2007), whereby the observer focuses on the employees and how they are performing their jobs and takes down information in relation to their behaviour patterns, job performance, interpersonal skills, and time management (Downs, 2008).

#### 3.7.1.3. Focus groups

According to McClelland (1994c), focus groups have been long used as a tool for developing theories, highlighting that until more recently, these have transformed into a significant research tool used across several fields involving behavioural influence and their impact or outcome measured and subsequently analysed. Nevertheless prior to data collection there is a need to develop a good understanding of the complexity of behavioural issues and group dynamics as part of a group setting. This method involves interactions within small groups, whereby specific issues or problems are discussed with an aim to develop new ideas, solutions and suggestions (McCullough, 2011). However, when members occupying different seniority/position levels are involved and also have superior-subordinates relationships, this can hamper their level of participation as a result of unease regarding the expression of their views and opinions. Similarly to observations, focus groups are only useful in assessing training needs when used in combination with other data-gathering methods (McClelland, 1994c). In relation to TNA, focus groups can help to provide preliminary data that can be used as a basis to design questions that will make up the questionnaire (Alkinani, 2013) and also provide a good insight into the learners' job environment, actual level of skill and performance together with an evaluation of expected skill and performance level (Tobey, 2005).

#### 3.7.1.4. Interviews

Interviews have been increasingly used to collect TNA feedback, providing a chance to explore the direct interaction between HRD and employees for whom some form of training intervention is either being considered or specifically directed to (Birnbrauer & Tyson, 1985). This scope for interaction is useful to needs analysts as it can demonstrate clarification pertaining to the most critical needs from an employee’s perspective (McClelland, 1994b). In an industrial context, interviews usually take place with a selected number of employees (Aamodt, 2013) whereby a rich and an in-depth insight into training needs based on the various responses to the questions is obtained (Patton & Pratt, (2002); Aamodt, (2013). Further, this method allows the unravelling of issues that might not be observed using other research methods. Nevertheless, similar to other qualitative methods, such as focus groups and observations, the effectiveness of interviews is best reflected when combined with another data collection method especially with a quantitative nature such as the questionnaire (Alkinani, 2013).

#### 3.7.1.5. Performance appraisal forms

Performance appraisals/performance management systems can be used to gather data in relation to employees' training needs. Landy and Conte (2010:233) conceptualised performance management as a "*system that emphasizes individual behaviour and organisational strategies and goals by defining performance in the context of those goals; jointly developed by managers and the people who report them*." Performance appraisal as a data collection tool occupies a key place in performance management system and can be defined as "*a formal and systematic process by means of which the job-relevant strengths and weaknesses of employees are identified, observed, measured, recorded and developed*" (Erasmus & Schenk, 2008:369).

This method is also viewed as being rather complex and controversial as a data-gathering tool in the human resource field (Roberts, 2002). In relation to TNA, the use of performance appraisals to assess training needs is debatable as a result of the many problems that this method produces, and which can have a negative impact on the accuracy of the identified needs (Leat & Lovell, (1997); Herbert & Doverspike, (1990). For example, it has been argued that performance appraisals have a multi-purpose nature and tend to work towards too many objectives concurrently. Also, the raters' perceptions of employees when using this method are also influenced by biases such as halo effect, attribution, primacy-recency, and strictness-leniency which can, in turn, affect the accuracy of training needs data. Therefore, it is important that performance appraisals are used alongside other methods, such as interviews and surveys, to yield better TNA data (Brown, 2002).

#### 3.7.1.6. Assessment centers

Tracey (2004) suggested different methods for TNA amongst which are what is commonly known as assessment centres; a method also used to assess training needs (Jamil, 2006). Assessment centres generally consist of an amalgamation of several different measures such as psychometric tests, interviews, observed performance on computer-generated tasks, written tests, peer assessment, role plays, in-basket exercises, business games and presentations to recognize training needs (Osborne, (1996); and Jamil, (2006). However, it is worth noting that assessment centres may not be useful and relevant to all organisations gave that they can be costly. As such, companies that are able to afford complex training systems are the ones that generally use them, and tend to be the big and well-established organisations. Therefore, due to this reason, this method is normally used only for senior-level employees, who have more experience and knowledge (Jamil, 2006).

#### 3.7.1.7. Advisory committee

An advisory committee can be regarded as similar to a focus group; it also involves the use of a group decision-making technique among employees across different levels in organisations that are knowledgeable about an issue. This method has several benefits, for instance, it maximises management involvement and sponsorship during the TNA process, it is not costly, and since it involves a decision-making process it allows easy implementation of results (McCoy, 1993). However, this method is not without drawbacks as it is time-consuming, may result in various difficulties regarding the smooth running of meeting organisational involvement of all members as well as encountering groupthink syndrome in relation to group decision-making (McCoy, 1993).

#### 3.7.1.8. Knowledge, skills and abilities tests

Tests can also be used to assess employees’ levels of knowledge, skills and abilities. Using such tests helps to probe into whether a performance problem is the outcome of some form of deficiency of knowledge or skill, or if the identified issue could be remedied by working on an unproductive attitude. Data analysis and comparison of findings are easy to carry out when KSA tests are used. However, there is dearth of reliable tests that would be effective in measuring a specific situation (Goldstein & Ford, 2002).

Table 3.2 illustrates characteristics the advantages and disadvantages of each method that can affect both the kind and quality of the information obtained.

**Table 3-3: Advantages and Disadvantages of Needs Assessment Methods**

| Methods | | Advantages | Disadvantages |
|---|---|---|---|
| **Questionnaire** | May be in the form of surveys or polls of a random or stratified sample or an entire population.<br>Can use a variety of question formats: Open-ended, projective, forced-choice, priority ranking. | Can reach a large number of people in a short time.<br>Are inexpensive.<br>Give opportunity of response without fear of embarrassment.<br>Yield data easily summarized and reported. | Make little provision for free response.<br>Require substantial time for development of effective survey or questionnaire.<br>Do not effectively get at causes of problems or possible solutions. |
| **Observations** | Can be technical, functional or behavioural.<br>Can yield qualitative or quantitative feedback.<br>May be unstructured. | Minimize interruption of routine work flow or group activity.<br>Generate real-life data. | Requires a highly skilled observer with process and content knowledge.<br>Allow data collection only in the work setting.<br>May cause “spied on” feeling. |
| **Focus Groups** | Can be formal or informal.<br>Widely used method.<br>Can be focused on a specific problem, goal, task or theme. | Allow interaction between viewpoints.<br>Enhance “buy-in”; focus on consensus.<br>Help group members become better listeners, analysers, problem solvers. | Are time-consuming for both consultants and group members.<br>Can produce data that is difficult to quantify |
| **Interviews** | Can be formal or casual, structured or unstructured.<br>May be used with representative sample or whole group.<br>Can be done in person, by phone, at the work site, or away from it. | Uncover attitudes, causes of problems, and possible solution.<br>Gather feedback; yield of data is rich.<br>Allow for spontaneous feedback. | Are usually time-consuming.<br>Can be difficult to analyse and quantify results.<br>Need a skilful interviewer who can generate data without making interviewee self-conscious or suspicious. |
| **Performance Appraisal** | May be conducted informally or systematically.<br>Conducted by manager; appraisal developed by HR.<br>Should be conducted on a regular basis and separately from merit discussions. | Indicate strengths and weaknesses in skills, and identify training and development needs.<br>Can also point out candidates for merit raises or promotions. | Can be costly develop the system, implement the appraisals, and process the results.<br>May enable managers to manipulate ratings to justify a pay rise.<br>May invalidate the appraisal because of supervisor bias.<br>May be prohibited for union employees |

**Table 3-3: Advantages and Disadvantages of Needs Assessment Methods (continued)**

| Methods | | Advantages | Disadvantages |
|---|---|---|---|
| **Assessment Centres** | For management development. Require participants to complete a battery of exercises to determine areas of strength that need development. Assess potential by having people work in simulated management situations. | Can provide early identification of people with potential for advancement. More accurate than "intuition." Reduce bias and increase objectivity in selection process. | Selecting people to be included in the high-potential process difficult with no hard criteria available. Are time-consuming and costly to administer. May be used to diagnose development needs rather than high potential. |
| **Advisory Committee** | Secure information from people who are in a position to know the training needs of a particular group. Supply data gathered from consultants by using techniques such as interviews, group discussions, and questionnaires. | Are simple and inexpensive. Permit input and interaction of a number of individuals with personal views of the group's needs. Establish and strengthen lines of communication. | Carry biased organisational perspective. May not represent the complete picture because the information is from a group that is not representative of the target audience. |
| **Tests** | Can be functionally oriented to test a board, staff or committee member's understanding. Can be administered in a monitored setting or "*take home*" | Can be helpful in determining deficiencies in terms of knowledge, skills, or attitudes. Easily quantifiable and comparable. | Must be constructed for the audience and validity can be questionable. Do not indicate if measured knowledge and skills are actually being used on the job. |

Source: Brown (2002:575-76)

## 3.8. Techniques used in conducting TNA

According to Stanley (1987) needs assessment (e.g. MTD - management training and development programmes) should be based on organisational, operational/task and individual analysis with the use of adequate techniques. This would enable the organisation to have access to useful information collected about it, the job as well as the individual/s in order to detect any issue pertaining to any of these elements.

### 3.8.1. Organisational level

Techniques developed at an organisational level help to assess the overall success of business performance in an attempt to aid companies to plan the approach they wish to adopt, as well as their missions. In doing so, these can also lead to a need to improve human resource capabilities (Jamil & Som, 2007). There are several techniques used at this level to gather data and the most commonly used ones will be briefly discussed below.

#### 3.8.1.1. Organisational/environmental scanning

This process operates on a managerial level and aims to gather information about events, trends, and relationships within a company's external environment that will contribute towards the management and planning of the organisation's future strategies (Choo and Auster, 2001). Several authors have shared the above proposition with an emphasis on the importance of evaluating training needs on an organisational level (e.g. Chiu et al., (1999); Jamil, (2006). Existing research highlights the usefulness of this technique in enhancing organisational performance (West, (1999); and Elfazani, (2013).

#### 3.8.1.2. Balanced scorecard

Developed by Kaplan and Norton (1996) this is viewed as one of the main instruments used to quantify business performance (Marr & Schiuma, 2003) in line with four balanced perspectives: financial, customer-related, internal business procedures, and learning and growth. Kaplan and Norton (1996) claimed that a state of balance, underlied by financial measures of past performance combined with measures of future financial performance, would largely help an organisation to maintain a competitive edge in the market. This technique potentially identifies gaps between personal and departmental goals as well as those directed towards the organisation's strategy (Alkinani, 2013).

#### 3.8.1.3. Strengths, Weaknesses, Opportunities, Treats (SWOT) analysis

SWOT analysis is a technique used to decide upon strategies in the early stages of the decision-making process by identifying the organisation's strengths, weaknesses, opportunities as well as threats. It can yield useful information that could be used to match organisational resources and potentials to the surrounding competitive environment in which it functions (Graig, 1997). The various strengths in SWOT could refer to brand names, patents, reputation, while the weaknesses might refer to any barriers impeding the success of an organisation such as unavailability of resources and hindering costs. Opportunities allow an organisation to satisfy customers' needs while, a threat is anything which acts as an obstacle shadowing what an organisation aims for, such as an unfavourable shift in the external setting (Jamil & Som, (2007); Chiu et al., (1999).

#### 3.8.1.4. Political Economic, Social, Technological (PEST) analysis

PEST is generally used to assess the macro-environmental factors that affect organisations (Mullins, 2007) and can also locate the opportunities and threats from the SWOT scanning (Jamil, (2006); Jamil & Som, (2007). Political factors could be rules, regulations and legal matters that can influence the actions of an organisation. Economic factors are those that have an impact on customers' purchasing power. Social influence refers to any factor(s) that can affect the demographic and cultural aspects of a company's external macro-environment. As for the technological factors, these can affect barriers, production capacity, outsourcing decisions amongst others.

### 3.8.2. Operational (or Task) level

According to Mahfod (2014), at the task level, TNA requires systematic gathering of information about a specific task, or set of tasks, in an endeavour to determine the knowledge, skills, and attitudes necessary for certain aspects of a specific job to be completed. The few techniques that work towards the achievement of the above are outlined below.

#### 3.8.2.1. Job analysis

Job Analysis entails data collection on a specific task on two levels: what would, or does the job comprise of; and what KSAs are required on behalf of the employee to undertake the job (Desimone, et al., 2006). It has been argued that this type of analysis is not simply limited to training purposes but can also be used to assist other human-resource related issues, such as safety and staff-development ( Jamil, 2006). A major drawback of this technique is its claimed ability to determine the requirements of a job, which has been argued to be less effective given its slow response to rapid continuous changes occurring in the $21^{st}$ century (Rossilah, 2002).

#### 3.8.2.2. Competency analysis

Noe (2005) suggested that competency analysis allows organisations to tap into the necessary KSAs, the values and personal characteristics to satisfy both the current and future organisational expectations. Dubois and Rothwell (2004) explain that the competencies in question relate to the knowledge, skills, attitudes, mindsets, and thinking patterns which are important for an individual employee to have so that s/he is fully equipped to carry out any task successfully and within the same department (Jamil, (2006); Jamil & Som, (2007). Competency analysis is widely used since its focus is not restricted to current performance discrepancies but goes beyond to also examine future needs (Jamil & Som, 2007).

#### 3.8.2.3. Skills inventory

Jamil (2006) suggested that skills inventory entails the comparison of skills and knowledge necessary to complete a particular job with the skills that the employee actually possesses.  Any identified gap between the two is then used as a foundation upon which any training interventions for the benefit of employees will be planned. Perhaps the underlying strategy used by this technique is still rooted in the traditional conceptualisation of TNA, whereby training is given in cases where a gap between current and expected performance is felt (Jamil, 2006).

### 3.8.3. The Personal ( Individual) Level

As Mahfod (2014) pointed out, individuals vary in terms of their strengths, weaknesses, knowledge, skills, and aptitudes. As such, examining the nature and type of employees in need of training at an early stage during the process helps to boost the effectiveness of the organisation. Various data collection techniques can be adopted at the individual level of analysis including objective records, and situational and observational measures. Some of the main ones will be investigated below.

#### 3.8.3.1. Repertory grid analysis

This method is specifically used to identify training needs at an individual level (Peters, (1994); Osborne, (1996); Graig, (1997); Jamil & Som, (2007). The repertory grid analysis is comprised of structured interviews directed towards managers with an aim to distinguish between effective and non-effective performers (Jamil, 2006). Peters (1994) highlighted a few advantages of this technique, namely it helps to develop a new understanding of a performance problem that aids companies to distinguish between good and poor performance. In doing so, managers are then in a better position to capture how the organisation operates as a whole system.

### 3.8.3.2. Versatility chart analysis

This method relies on the use of a checklist approach to assess whether a person has or even lacks skills (Jamil & Som, 2007). The outcomes of the Versatility Chart would be used as an indicator to identify an employee's training needs as well as a training scheme that could be used to address those needs. As part of this technique, raters ticking completing a simple matrix with employees' names and tasks are usually used. Using interviews and observations of employees regarding their KSAs, data is collected to identify these. In some cases, a self-assessment method can equally be used (Jamil, (2006); Osborne (1996).

### 3.8.3.3. Diary analysis

Osborne (1996) stated that diary analysis involves employees recording their behaviours, thoughts, feelings, hopes, problems and uncertainties; it can be structured or unstructured. The structured method involves analysing the ways employees make use of their time on a particular task. In order to make sense of the records, these need to be directed to the employees' supervisors and team members who will discuss their interpretation of the data while also assessing it against some performance criteria. Such an attempt can reveal any training requirement (Jamil, 2006).

Conversely, the unstructured method is used in situations where there is a need to tap into employees' detailed thoughts /feelings in order to understand a situation / task / job by engaging in a comparison between their actual performance and the expected one with the assistance of a reliable TN analyst. Similarly, the outcome will indicate any training needs for the employees. Although useful, this technique can be very time-consuming and largely depends on close monitoring and briefing on behalf of the analyst(s) to employees (Jamil and Som, 2007).

## 3.9. Previous studies

The following Table 3.4 shows a list of previous studies related to TNA practices from several types of research in various of organisations in different countries.

**Table 3-4: List of previous studies related to TNA practices**

| Author & Date | Title of Article or Thesis | Location |
|---|---|---|
| Agnaia (1996) | Assessment of Management Training Needs and Selection for Training: the Case of Libyan Companies | Libya |
| Abdulrahim (2011) | The Path to HRD: An Investigation of Training and Development Practices in the Libyan Manufacturing Sector in the 21st Century | Libya |
| Elfazani (2011) | An Investigation of Training and Development Programmes in Libyan Banking Organisations | Libya |
| Atoki (2013) | An Investigation of Training Needs Assessment Processes in a Libyan Organisational Context: Case Study of the Libyan General Electricity Company | Libya |
| Bu Qefel (1998) | Enhancing the Training Process in the Public Sector of the United Arab Emirates with Special Reference to Training Needs Assessment, Objective Development, Trainees Selection and Evaluation | Emirates |
| Altarawneh (2005) | Training and Development Effectiveness: Practices, Roles and Impacts on Performance in Jordanian Banking Organisations | Jordan |
| Elbadri (2001) | Training Practices of Polish Companies: An Appraisal and Agenda for Improvement | Poland |
| Jamil (2006) | Training Needs Analysis (TNA) Practices: A Survey of the top 1000 Companies in Malaysia | Malaysia |
| Rodič et al. (2012) | Issues in Introducing Training Needs analysis in Slovenia's Public Administration | Slovenia |
| Sherazi et al. (2011) | Training needs assessment practices in corporate sector of Pakistan | Pakistan |
| Shah and Gopal (2012) | Training needs analysis for bus depot managers at GSRTC | India |

Through previous studies, researchers can determine the problems facing TNA processes and then collect primary and secondary information, which helps to analyse and interpret more of the TNA phenomenon.

The problem of informal practices of TNAs within organisations has long been an issue. In 1952, Moore, (2006) conducted a survey to identify TNA practices in the industry and found that only one in ten companies involved in the survey conducted a systematic approach to TNA. Judgemental approaches like management requests and talks with supervisors were found to be the most popular ways of determining training needs. Now, after more than five decades, the situation has changed significantly.

### 3.9.1. Research findings of Agnaia (1996)

Among the early studies conducted in Libya and focused on assessment of managing training needs and selection for training in Libyan companies. The survey was disseminated to 45 oil and non-oil companies. Data was collected through several methods including questionnaires and interviews and the researcher's personal experiences in the Libyan industry.

The findings indicated that the approaches and techniques the companies used in selecting training participants and TNA did not involve any communication with the employees and was predominantly based on nominations according to performance reviews. As such, supervisors were central in training needs (TN) decision-making. The main difficulties found in selecting and assessing training needs are listed as follows:

- Insufficient or unclear procedures regarding training activities in organisations
- Unsteadiness of administrative staff and organisational structure
- Lack of cooperation from senior management regarding training activities
- Problems such as ethnic loyalty, kinship, and personality conflict between subordinates that might influence the accuracy of identified training needs

The study also found no clear evidence as to whether companies conducted TNA at the three levels of analysis (needs of organisational, operational and individual). The researcher believes the reason is probably the lack of knowledge or relevant qualifications for managers who have a role in training and development activities in those companies.

The researcher stated that the TNA was often neglected, and nominating employees for training occurred due to motivational elements such as training allowances, possible promotion resulting from attendance, and also a chance to escape from work and take responsibility.

The researcher confirms that assessing training needs by performance reports or from the standpoint of direct manager does not always reflect the true situation and needs of employees, because they may be unclear, or may be subject to family, kinship, tribalism and friendship ties.

The researcher recommends that the organisations should be given more effort for all aspects of training programmes, including TNA, through the implementation of further research and studies on this activity in Libya.

### 3.9.2. Research findings of Abdulrahim (2011)

The main purpose of this study was to understand the nature and level of maturity of HRD activities in LICs. It aims to assess whether or not the concept of HRD can be applied to the activities of these companies. As such, a descriptive approach was adopted in this research. The methods (qualitative and quantitative) used to collect data included semi-structured interviews and questionnaires. The results include the following:

- The vast majority of the investigated companies do not have the HRD formal system
- HRD programmes still being implemented on a gradual basis rather than through a systematic long-term policy
- The results, which were common among the majority of companies is the lack of organisational TNA methodology and the lack of effective procedures for assessing training and development
- Libyan organisations have made little progress along a continuum of training and development for HRD
- In many of the small industrial companies, the analysis of needs is not considered an important matter

- Most manufacturing companies in Libya were not systematic in their analyses of training and development needs, therefore, it may be that analysts are not efficiently trained enough
- Most of the manufacturing companies performed needs analysis in their companies without taking into account the views of companies' employees which were not considered important
- The practitioners in the manufacturing companies did not widely use formal methods but prefer informal methods such as direct observation, personal interviews with subordinates and asking executives about their training requirements related to the needs of their staff

The results revealed Libya must address the challenge of strengthening staff learning and development in the workplace if it is to conduct proper human resource practices within the manufacturing sector. It is also essential to deal with the demand for knowledge in the workplace. The researcher emphasizes that the TNA is the first step with respect to training and development. This study found that 37.5% of the 56 companies surveyed based assessment and the needs analysis once a year.

The researcher asserts that it is necessary to provide training and development. This is essential in order to raise the performance of individual employees, improve productivity, and achieve organisational success.

The researcher concluded that the manufacturing companies do not consider the nature or needs or objectives of long-term for HRD, and this is evidence of a lack of maturity in the development of HRD.

### 3.9.3. Research findings of Elfazani (2011)

This study addressed the practices, and training and development programmes that are being implemented in the Libyan banking sector between 2005 and 2009. The study has been on the Bank of the Republic. The researcher used two main sources of data: archival materials such as annual training plans, training programmes, and 14 semi-structured interviews with managers in the workplace training sector, members of the Supreme Committee for Training, and representatives from senior management.

The field data for this study came from interviews with three groups of staff concerned with training activities. The interview protocol has been structured to elements of the training cycle methodology derived from the literature with a focus on identifying training needs and their role in the design, implementation and evaluation of training programmes.

The research method used in this study is a qualitative method to describe detailed situations, events, people, interactions, and behaviours that can be observed. It also includes what the participants and their experiences, attitudes, beliefs, thoughts and reflections as expressed by themselves.

A summary of the results is as follows:

- There was no clear framework for training needs identification and analysis. Hence, an individual worker/supervisor approach was used to identify training needs, as confirmed by bank documentation, which clearly indicated that there was no training needs identification framework
- The current situation for identification of training need in the bank depends on personal supervisors' attempts by filling out forms identifying training needs, and do not use methods recommended best practices to identify training needs, such as analysis of the organisation, job analysis and individual analysis. Therefore, should identify them by different methods, such as performance evaluation reports, and job descriptions, direct observation, interviews and face-to-face with the staff
- There is a shortage of experts in the field of training in terms of experience and scientific qualifications, who could organize the job and individual analysis to reach an accurate identification of training needs in the bank by a scientific approach. Therefore, the Bank relies on training offering at the request of the trainees for the programmes that they want

The research concluded that training and development is one of the key factors for the success of organisational and national competitiveness. Therefore, organisations need to pay attention to the training and development of its employees in order to help them do their current and future duties effectively and efficiently. The researcher recommends further research to answer the following question: are the job requirements sufficient to identify training needs?

### 3.9.4. Research findings of Atoki (2013)

This study focuses on TNA in the Libyan General Electricity Company (LGEC) and investigates training processes and TNA. This study adopts qualitative methodology, using semi-structured interviews and focus group interviews on obtaining important data and information from people responsible for training and from those who have received training.

The study findings indicated that:

- There is no accurate analysis in relation to the individual level before making any decisions regarding the actual identification of the training needs for the candidates to attend training courses. It can be argued, that the company did not adopt any models of the performance analysis
- Social relationships (kinship and friendship, mediation and favouritism) have an impact on the process of determining training needs. Moreover, the regulations and rules governing the process of training were seldom applied effectively by managers
- There was a lack of employee involvement in deciding what and which training they need to have
- That most managers do not consider the company's objectives when they identifying the individuals who need training and design the training programmes. Also, they are not interested in using training to resolve some problems or difficulties facing employees while performing their duties.

One key contribution of the study was the development of a theoretical TNA framework comprised of six stages of implementation to suit the Libyan and Arabic cultural context in which needs assessment is undertaken through several steps due to the bureaucratic nature of management and hierarchical structure of organisation.

Another contribution of this study was the impact of social, personal economic and organisational factors on TNA processes and choice of employees for training. For example, favouritism and '*Wasta*' are commonplace in Libyan culture and plays some role in the nomination process. Furthermore, social relationships (kinship and friendship) affect the managerial performance when identifying training needs of employees, and absence of appropriate regulations relating to the process of identifying training needs.

Moreover, the study found that directors and managers interfere in this process, and this is not the case in Western literature.

### 3.9.5. Research findings of Bu Qefel (1998)

This study aims to describe and investigate the barriers to the process of vocational training from both academic and practical points of view. It also includes a TNA in the context of the public sector in the United Arab Emirates (UAE). Government organisations as recipients of training, and Management Development Institute as a provider of training (for the purpose of study the researcher used all of the field surveys and interviews to collect data and information). The researcher distributed (482) questionnaires to three groups: the trainees who graduated two years before the training, and supervisors, and training officers. The collection and analysis of (265) questionnaires ensued. Followed by (8) semi-structured interviews with staff from the Institute for Administrative Development. According to the study, the researcher adopted a descriptive statistical approach. Based on the findings, this study revealed that:

- There is a lack of effort in identifying the needs of the trainees before attending the training programmes
- There were no formal criteria for the selection of trainees to attend training programmes
- Among the critical factors that prevent the identification of training needs were values of society and cultural factors. For example, personal relationships within the organisation appeared to affect the selection of trainees. There also existed a lack of awareness of the importance of the training process
- The results of the comparison indicate that the UAE has made an effort to recognize TNA as it is in European public sectors. In the Arab context, government departments in the Sultanate of Oman have made other attempts to assess the effectiveness of the programmes compared to those of the UAE. The study also indicates that the Jordanian public sector adopts a wide range of methods for TNA from the UAE

The study provided recommendations for the reform of the training process, particularly with regard to TNA. One recommendation was that training programmes should be provided to trainees in order to determine the exact training so that there is a link between the training and the job requirements. Another recommendation, was that both of the Institute of Administrative Development and government organisation should participate in the selection of the appropriate methods for TNA, so they can provide accurate valid, and reliable decisions about training requirements.

### 3.9.6. Research findings of Altarawneh (2005)

This research study was conducted on the banks of Jordan and aims to explore current practices and policies and training roles and development. As well as to investigate the problems and challenges facing the Training and Development (T&D) activity and make suggestions to improve the effectiveness of these activities. The study included issues related to T & D practices, including TNA.

The researcher adopted a multi-methods approach. Data was collected through a combination of semi-structured interviews with 15 senior managers and dissemination of 38 questionnaires to people who are responsible for training and development in banks. This study targeted all Jordanian banking institutions rather than a representative sample of these organisations.

This study showed that banks faced many problems, such as:

- Banks conduct TNA on a regular basis every year. However, this approach to conducting TNA does not always reflect the effectiveness of conducting effective TNA process. Therefore, training needs should be assessed more than once a year.
- The most used TNA methods or techniques in Jordanian banks were questionnaires, interviewing with subordinates and direct observation, whilst the least used TNA methods were determination through specialist training committee, job description and performance records.
- Descript researcher TNA process is non-objective, because it depends on the viewpoints of line managers about employees' training needs, usually, they do not understand what employees need. Thus it is direct managers who decide whether or not employees need training and usually the supervisors or managers for some employees because they are relatives or friends,

especially when the training is abroad. As a result, trainees are nominated not because they need training but because their direct managers want that

- The least used TNA indicators in banks are poor performance, low profitability, high turnover, high absenteeism and low employee morale. This implies that these banks have not yet considered or recognized the important role of training on their organisational performance
- The lack of motivation among employees to attend the programmes was an issue

### 3.9.7. Research findings of Elbadri (2001)

A survey to investigate training practices was conducted on 30 human resource managers representing 30 different Polish companies of various sizes and industries.

The findings showed that organisational size and type of industry affect the training practices. In the larger companies that operate in the field of manufacturing, agriculture and fishing, the training is of more importance, reflected by specific training departments being within organisatios, and the companies in the manufacturing industry tended to conduct more TNA compared to companies in other industries, whereas small companies tend to place less importance on training, not having training departments in the organisation nor planning regularly for their training activities.

The research did not find any difference regarding data gathering methods used by the companies of different sizes and industries. Overall, the most used methods were management requests (90%), employee interviews (83%), performance appraisals (70%), performance documents (70%), behaviour observations (60%), and questionnaires (50%). The study indicates that cost, time, and ease of use become the most important factors in the selection of needs assessment method.

Moreover, it was found that organisations can avoid wasting time, effort, and money in training by using the only systematic identification of needs through the use of valid assessment techniques.

Among the recommendations of this study were:

- More involvement and support from senior management and supervisors in training processes in order to achieve the best results is encouraged
- Companies should look at T&D processes or phases as a system. This means that data from each phase should be used to revise and monitor the previous phase

### 3.9.8. Research findings of Jamil (2006)

The study attempts to address the question: are Malaysian companies conducting an analysis of training needs before implementing their own training? The researcher studied many aspects of TNA practices in these companies, such as procedures for the selection of participants in the training, data collection methods, and whether they were working on three levels of analysis.

The study reported that there is evidence of systematic procedures for the selection of participants in training with the involvement of multiple parties. Some companies also adopted the official data collection methods and techniques for the analysis of training needs may be less sophisticated because of the difficulties and problems constraining their practices.

The study showed that the respondents agreed that one of the main difficulties they face when conducting TNA in their companies is the lack of commitment, cooperation and support from all levels of management including senior management, supervisors and employees.

The researcher revealed that TNA practices of the top 1000 corporate companies in Malaysia were perhaps more positive compared with practices in other organisations as discovered by other researchers (e.g. Agnaia, 1996). However, this could probably be determined in future research comparing TNA practices of organisations in multiple countries.

The results of the study also indicated that all three levels of TNA analysis namely, organisational, operational and individual analyses were conducted by the organisations. The organisations adopted some formal data collection methods and techniques to analyse their training needs although the types that they used were probably less sophisticated and involved minimal analysis. Research suggested that the reason may be due to the difficulties and problems constraining their practices, which might have forced them to resort to those approaches.

Among the recommendations, the researcher highlighted that:

- The organisations must pay enough attention to trainees to ensure that their training efforts were in line with their strategic objectives
- Performance appraisals could be a useful method in TNA only if they are properly designed and implemented
- The successful integration of the theory of TNA into practice requires mutual participation from all parties involved in the activity, from senior management level to individual employees

### 3.9.9. Research findings of Rodič et al. (2012)

This study was carried out on the public administrations (PA) in the Republic of Slovenia, especially after the change, which happened in the civil service system. The new law was issued in 2003, which highlighted the relationship between public administration and society. This became a service for citizens rather than a government service. This new law confirms that the qualification of civil servants by training it means to ensure the effective professional management, and thus became the mandatory training of civil servants.

This law dictates that all decisions of training must be based on experts' analyses of organisational, occupational, and individual needs. One of the goals of the study was to identify and explain the differences between managers and their subordinates in terms of understanding TNA. The researcher believed that understanding the differences between groups of civil servants should be considered as important as an application of TNA. This may be due to the fact that most decisions regarding training and HRD depend on the views of managers on training needs. Therefore, the first research question was: what is the relationship of mutual between the demographic characteristics of the respondents and their attitude towards TNA? The second research question, what is the relationship between the TNA and the other stages of the training process? Because all stages of training depend on the results of TNA, and if not implemented carefully, the training programmes will not achieve their purpose.

The methodology of the study, identification of the study population of Administrative Units (AUs) that is the main form territorial organisations of public administrations. Researchers chose nine administrative units representative for the study population. The research sample was divided into two groups. The first group is heads of internal organisational units and included 54 managers. While the second group is subordinates and included 471 respondents.

Distributed 525 questionnaires and personally delivered to the heads of administrative units or their representatives, and 426 were obtained suitable for statistical analysis.

The findings of this study revealed:

- That TNA, training planning and training evaluation have an important influence on the effectiveness of training
- Significant correlations exist between TNA, planning, execution, and training evaluation
- The correlation between the effectiveness of training and TNA are lower than expected. This may be due to lack of non-conducting the systematic and continuous TNA
- The difference between the current practice and the recognized good practices is mostly a consequence of inadequate "training on training", i.e. that most managers are not aware of the principles of systematic training
- TNA should be used, for example, job analysis, serious accidents, performance appraisal. That the biggest obstacle to the introduction of systematic training in the management is the lack of adequate rehabilitation and the lack of experience of those who are responsible for training and development

Among the recommendations the researcher stated:

- Identification of the training needs should be performed continuously, not only once a year
- Training needs should be defined according to the future business needs and not just as a quick fix for current performance issues.

### 3.9.10. Research findings of Sherazi et al. (2011)

This study was carried out in Pakistan, in Islamabad and Rawalpindi region. The purpose was to investigate the managers' TNA techniques adopted and their impact on training outcomes. The study aimed to find out the type of TNA approach widely used in organisations. Also, there was an aim to find out the relation between comprehensive and detailed analysis of TNA and outcomes of the training process. For this study, the researchers selected twenty important organisations in Islamabad and Rawalpindi region. 60% were selected from services sector and 40% from the manufacturing sector. Distributed 120 questionnaires to the participants who were HR managers, executives HR, HR personnel, training managers and assistant training managers.

From the results of this study the following is suggested:

- The performance analysis should be used as a source of TNA to make training effective.
- That the organisations in Pakistan only focus on conducting the individual TNA before starting training programmes.
- The result showed that lack of comprehensive TNA approach gives less results and does not meet objectivity criteria of training programmes because comprehensive TNA starts from organisational level and operational level and then to individual level.

The important result is that researchers believe that after the literature review, if organisations, especially HRD personnel, adopt three level of TNA it can be more effective for a better result of training outcomes instead of conducting only one level of analysis. From data analysis, there are more than half of the organisation (60%) in large size organisations also paying attention toward the task or operational level analysis.

The most important recommendations were as follows:

- It is important for the Pakistani companies sector to adopt comprehensive TNA rather than focus only on individual analysis, which is completely dependent on appraiser evaluation, who may be biased in his behavior.

- This study only explores the TNA current practices and its impact on the training outcome and could not identify the best TNA technique.

In future, the study can explore the best techniques of TNA, which is more suitable to the Pakistani context.

### 3.9.11. Research findings of Shah and Gopal (2012)

The aim of this study was to identify and gauge the organisational and individual training needs, necessary to design and deliver effective training of the bus depot manager in Gujarat State Road Transport Corporation (GSRTC) in India. This study attempt to answering the following questions:

- What are the organisational and individual training needs for depot managers?
- What are the differentiating competencies for depot managers in GSRTC?
- How to improve the effectiveness of the training design and delivery?

Data was collected using two methods; first nine semi-structured interviews with the senior management team selected from 15 bus depots in order to explore their views about the benefits they expect from such training identification study, and aligning training requirements and overall goals of GSRTC. Thus, a good survey questionnaire (open-ended questions) to all the 114 depot managers following the company. Both qualitative and quantitative data analysis tools have been used in this study.

Based on the analysis, the following insights about training gaps have been explored for depot managers: training to bridge performance gaps, training for competition, training for managing subordinates and bosses, future areas for training such as computer skills, reporting to authorities and cost cutting mechanisms at depots, and other training gaps such as effective communication and disciplinary action.

This study provides some suggestions for effectively designing training programmes:

- Design the training programmes based on required competencies and levels of competencies for department managers to bridge the performance gap effectively.

- It is necessary to effectively communicate the existing performance gaps and the change required in order to align training with strategic and change initiatives.

### 3.9.12. Comparative discussions

The above represents research findings involving organisations and their different activities, sizes, sectors, and countries. Table 3-5 below further discusses these findings in a comparative way.

**Table 3-5: discuss the findings in a comparative way.**

| No. | The findings | Author(s) |
|---|---|---|
| 1 | No systematic and formal TNA | The number of studies has shown that many organisations used an informal and unsystematic approach to determining training needs and there was no clear framework for training needs identification (Elfazani, (2011); Agnaia, (1996); Bu Qefel, (1998); Abdulrahim, (2011); and Sherazi et al., (2011). Therefore, the lack of a comprehensive TNA approach gives fewer results and does not meet objectivity criteria in training programmes. |
| 2 | The viewpoints of line managers | Agnaia (1996); Altarawneh (2005); Sherazi et al., (2011) and Atoki (2013), they confirmed that TNA processes are non-objective because they rely upon the viewpoints of line managers and they do not always understand what employees need or may be subject to family, kinship, tribalism, and friendship ties. |
| 3 | Company size and type of activities | Only Elbadri (2001) has claimed that organisational size and type of industry affect the training practices. Such a finding makes sense because the greater the size of the workforce, it becomes necessary to having a separate management specifically for T&D. |
| 4 | Top management commitment to TNA | A lack of commitment, cooperation, and support from all levels of management including senior management, supervisors, and employees (Agnaia, (1996) and Jamil, (2006). It could be argued that collaboration from various parties in organisations, especially to produce relevant data, is crucial. |

| | | |
|---|---|---|
| 5 | Data collection methods of TNA | Methods of data collection and analysis used to establish training needs have varied across organisations. Therefore, should be a process of data collection aided by different methods, such as performance evaluation reports, job descriptions, direct observations, and face-to-face consultations with staff Elbadri, (2001); Altarawneh, (2005); Elfazani, (2011) and Rodič et al., (2012). |
| 6 | Analysis three levels | There is no clear evidence as to whether companies conducted TNA at the three levels of analysis. However, Sherazi et al. (2011) recommend that if HRD adopt three levels of TNA they can increase effectiveness and achieve better results. |
| 7 | The qualifications and experience | Elfazani (2011); Rodič et al. (2012) and Abdulrahim (2011) they confirmed that the lack of adequate rehabilitation and the lack of experience of those who are responsible for T&D. The most managers are not aware of the principles of systematic training. |
| 8 | The problems affect TNA process | There are some factors that might influence the accuracy of employees' nomination processes. For example, problems such as ethnic loyalty, kinship, and personality conflict between subordinates that might influence the accuracy of identified training needs (Agnaia, (1996); Bu Qefel, (1998); Atoki, (2013). |
| 9 | Reactive vs. proactive TNA | Rodič et al. (2012) and Shah and Gopal, (2012) are confirmed that training needs should be defined according to future business needs and not just as a quick fix for current performance issues. |

Chapter 4 sets out the quantitative and qualitative research methodology used to complete the study, detailing how LISCO and the NCC were chosen to be involved in the study.

# Chapter 4. Methodology

## 4.1. Introduction

The purpose of this study is to investigate the current practices relating to TNA being implemented in LICs, focusing on LISCO and NCC. The methodology selection begins with the definition of what is, and how it is, to be accomplished (Eltaweel, 2011). Literature suggests that the process of selecting the most suitable research method should occur in three stages. Firstly, identifying the type of evidence which needs to be collected, where it will be collected from and how it will help answer the central research question(s). Hence, bearing this in mind, the current study aims to collect both quantitative and qualitative data from different people working in two different companies. Using a mixed-method approach will allow the researcher to gain a more in-depth insight into the TNA practices of these organisations. Secondly, they must select the research strategy. For example, an inductive approach is more appropriate for research that aims to understand rather than just describe a specified phenomenon. In fact, this is also applicable in this study whereby its main aim is to investigate the research topic in order to have a better understanding of how the TNA practices are implemented. Thirdly, the researcher personally needs to adopt a focus on understanding the phenomenon in question and be able to explore this understanding in light of previous research (Gill and Johnson, 2011). Such an endeavour will also be achieved in the current study by paying careful attention to previous research in this area. This will allow a comparison with regards to the research methodologies and findings.

This chapter includes eight sections; definitions of training, identifying training needs, the theoretical framework of TNA, role of TNA and training effectiveness, different TNA models, sources of data to identify needs, techniques used in conducting TNA and previous studies. Therefore, this chapter highlights the key points from an extensive review of the literature on TNA in order to provide the conceptual background for the empirical work. Also, this chapter draws upon studies that cover the nature of training and development issues facing the organisations in different countries, particular developing.

This chapter discusses the methodology adopted in this study. It explains the aim of the study, how the sample was selected and the rationale behind this selection. The study adopts both quantitative and qualitative approaches. These two approaches are widely used in social research. Questionnaires and semi-structured interviews were developed in order to collect data from technical staff, managers and trainers in two companies. The resulting data sheds light on the TNA process within these companies.

## 4.2. Research philosophy

Research philosophy is the most important element to be considered in the research design process (Elfazani, 2011). Saunders, *et al.,* (2007:101) stated that "*an adopted research philosophy underlies important assumptions with regards to how reality is constructed*". These assumptions will form the basis on which the research strategy and methodology will be grounded and hence shaped. The philosophy is usually influenced by practical considerations, in particular, the link between knowledge and how the latter is developed.

### 4.2.1. Paradigmatic approach of the current study

Guba and Lincoln (1994:106) conceptualised paradigms as "*basic belief systems based on ontological, epistemological and methodological assumptions*". In terms of social research, epistemology must be considered whether in the design of the research project or in the determining of the knowledge that should be considered in relation to the phenomena being studied. Blaikie (2010) refers to epistemology as a theory of how human beings come to have knowledge of the world around them. The ontological asserts that social phenomena and their meanings have an existence that is independent of social actors (Bryman and Bell (2007).

Based on the classification system of Guba and Lincoln (2005), the two main paradigms that are the backbone of the current research are positivism and interpretivism.

Positivism is essentially grounded in a scientific approach that aims to discover and present the truth using empirical methods (Henning, *et al.*, 2004:17). Empiricism, generality and determinism are some of the main assumptions of this paradigm, which are reflected in the quantitative nature of the current study (Cohen et al., 2000). Further, the ontology and epistemology adopted in this research accept that reality cannot be separated from the individuals, therefore knowledge of that reality is interpreted by participants and practitioners in the implementation of TNA.

Using an interpretive paradigm, researchers usually aim at understanding a phenomenon rather than explaining it (Cohen *et al.,* 2007:19). The focus of any research based on interpretivism is on subjective observation through direct experience from the inside instead of the outside (Cohen et al., 2007). In fact, this is clearly depicted in the current study as it also aims to explore the issues involved when implementing the TNA in both companies.

#### 4.2.1.1. Ontological and Epistemological assumptions

It is generally accepted that one's perception of reality is known as ontology, whereas the view of the way in which one gains knowledge is known as epistemology (Crotty, 2009). Grix (2004) explained that there is an inter-relationship between a researcher's ontological assumptions, epistemological assumptions, and research methodology as each one influences the other in an orderly manner. In fact, according to Crotty (1998), ontological assumptions and epistemological assumptions often tend to overlap; hence, they form a theoretical perspective (Guba and Lincoln, 2005).

## 4.3. Research strategy

A positivist approach and interpretive approach was considered most appropriate for this research, as it focuses on trying to understand social situations and the development of ideas through the extrapolation of data using empirical means. This stance influences the research strategy by offering a variety of data collection tools, suitable for data gathered from the industrial sector in Libya. It is also considered to be the most appropriate way to obtain quantitative and qualitative information that targets experiences, views and perceptions of workers in that sector. Moreover, it helps to explore the current situation and practices, to identify training needs, and also to identify all the challenges that may be encountered when implementing training needs in LICs.

There are seven widely used strategies for primary data collection: case study, archival examination, experiment, ethnography, survey, grounded theory and action research (Saunders, *et al.,* 2007). Taking into account the objectives of this study (as previously highlighted), this research uses the case-study research method involving questionnaires and interviews as its research tools. These will be further discussed later in this section. It is expected that the employees in the companies should be able to yield rich insights into how TNA is practiced within the real-life context of the Libyan industrial sector. In order to achieve this, the research instruments have been designed with very specific questions that will also lead the participants to further stretch their answers in order to provide in-depth information. This will be discussed in more detail at a later stage in this section.

## 4.4. Research design

A research design is the general plan of how the researcher will answer the research questions, starting with the collection of data up to the data analysis stage including careful consideration of the ethical issues (Bryman and Bell, 2007). Furthermore, a research plan should aid the researcher in addressing the following questions: What is being researched? Why is this subject examined? How will this be done? And where will the study take place? These questions should be answered in a logical and convincing manner (Maxwell, 1992). The current study is specifically aimed at answering each of the above questions throughout this section.

Bryman and Bell (2007) as well as Sekaran (2003) see the research design as a strategic plan for conducting research. The key elements of the research process from a sequence of steps, which must be undertaken if the research is to achieve its objectives. The process of designing the research allows the researcher to specify the details of the research task and to establish the strategies that will give them the best chance of obtaining robust and reliable results.

Figure 4.1 below provides an outline of the research design process that the current study followed in order to achieve its objectives.

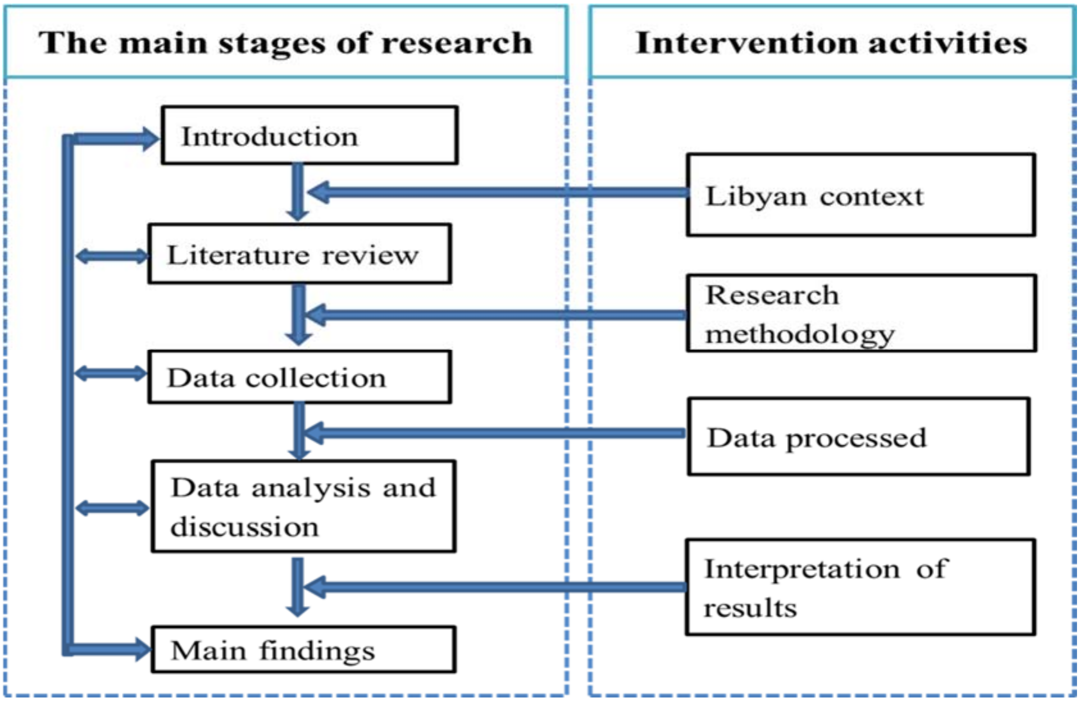


**Figure 4-1: The outline of the research design process**

The introduction and literature review of this study will primarily focus on the Libyan environment in order to investigate the TNA from a contextual perspective. The research methodology has been chosen based on the adoption of a mixed-method approach to yield both quantitative and qualitative data, which will allow the researcher to gain a deep insight into the topic. Using statistical methods as well as thematic analysis, the data will be processed to obtain the findings that will then be interpreted and discussed. Overall, it could be suggested that the research design of this research project follows a linear model that proved to be successful in practice.

## 4.5. Research approaches and techniques

Research approaches can be categorized into two broad types: quantitative and qualitative. Silverman (2005) defines methodology as the choices made about which cases to study, the methods of data gathering, and the forms of data analysis. Neuman (2006) argues that each approach has its own epistemological and ontological assumptions and that these have different implications for the collection and interpretation of data. In this research, both quantitative and qualitative approaches have been selected as they are both suited to the research aims. According to Blaxter, *et al.*, (2006:199) the difference between the qualitative and quantitative approaches is such that *"among these different kinds of data we may recognize a basic distinction between the quantitative (i.e. numbers) and the qualitative (i.e. words and everything else)*". Based on previous work carried out by Bryman and Bell (2007), quantitative researchers see qualitative research as an exploratory way of conducting social investigations. There are three main differences between the qualitative and quantitative approaches:

1. Qualitative research is mainly interested in understanding the complex interrelationships between different variables while quantitative researchers are concerned with having explanation as the main purpose of the inquiry
2. Proponents of qualitative research see this approach as a useful tool to establish meaning through in-depth interpretation
3. The influence of researchers in the research setting is limited in quantitative research, yet strongly pronounced in qualitative research

Therefore, with an aim to maximize the advantages of both quantitative and qualitative research while minimizing their disadvantages, a mixed-method approach has been adopted in the current research to investigate the quality of TNA for technical staff in non-oil industrial companies. This methodological blending is believed to allow each approach to compensate for the weaknesses of the other.

In fact, most researchers regard the positivist and interpretive paradigms as complementary; each approach has its own advantages and disadvantages. Teddlie and Tashakkori (2009) argue that an examination of quantitative and qualitative paradigms helps to draw out their strengths and weaknesses and establish how their different approaches can complement each other.

Previous studies have focused mostly on general T&D or on specific training stages such as training programmes and their evaluation. It is therefore hoped that this study will contribute to the existing literature, especially in relation to the Libyan context. The research was designed, not only to investigate the case companies' approach to TNA but, to provide an appropriate model for use by other companies. Given that identifying needs is the first step in the training process, it is important that this is done accurately if the rest of the process is to be successful. To this end, data will be collected from all those involved in training, including technicians, line supervisors and those responsible for training.

### 4.5.1. Use of a mixed-method strategy in the current study

Research can be quantitative, qualitative or comprise a mixture of both (Rajasekar, *et al.,* 2006). The qualitative paradigm is associated most strongly with social research and is used for the investigation of phenomena that may not be explained by numbers and indices. Instead, phenomena are understood by analysing participants' descriptions of events (Bryman and Bell, 2007). Via the qualitative approach, data is gathered in the form of verbal or written words rather than numbers (Leedy and Ormrod, 2005). Qualitative research seeks to understand respondents' perceptions of and attitudes towards a phenomenon (Easterby-Smith, *et al.,* 2002). Hence, this research relies on its qualitative methodological aspect to probe into the various issues encountered in the two chosen companies through the experience, attitudes and perceptions of the workers. In particular, this approach was adopted to examine and reflect on employee perceptions and expectations of the TNA process. Semi-structured interviews were conducted to gather data on the feelings and opinions of employees and managers involved in this process.

The quantitative method, in social sciences, is a generic term for any approach where the researcher uses statistical analysis to search for possible relationships between variables (Bryman and Bell, 2007). Quantitative research yields data that can be analysed in numerical terms. This data is easily translatable into charts and graphs, and its quality can be judged using formal measures of reliability and validity. The aim of quantitative research is to discover patterns or theories that may help to explain a phenomenon (Sultan, 2006). Quantitative research is less likely to deviate from the original research plan and its results are more readily analysed and interpreted. Therefore, bearing in mind that the current study is also rooted in positivism, the researcher also intends to emphasize and strengthen the empirical nature of this research. As such, this can mainly be achieved with the inclusion of quantitative data. The quantitative approach was used to collect and analyse data from the sample study using questionnaires.

The aforementioned approaches are not mutually exclusive, however, it is possible for a single investigation to use both methods (Johnson and Christensen, 2011). This study intends to make use of a qualitative approach to further explore findings obtained using the quantitative method. That is the qualitative data that was collected first informed the design of the questionnaires that were distributed to the study samples of managers and trainers of the two companies. Neuman (2006) has argued for a "best of both worlds" approach, suggesting that qualitative and quantitative approaches should be combined. He has listed the key characteristics of each method which are presented below in Table 4-1.

**Table 4-1: Key characteristics of qualitative and quantitative approaches**

| Quantitative approaches | Qualitative approaches |
|---|---|
| Measure objective facts | Construct social reality, derive cultural meanings |
| Focus on variables | Focus on interactive processes/events |
| Reliability is key | Authenticity is key |
| Value free | Values are present and explicit |
| Theory and data are separate | Theory and data are fused |
| Independent of context | Situation-constrained |
| Many cases/subjects | Few cases/subjects |
| Statistical analysis | Thematic analysis |
| Researcher is detached | Researcher is involved |

Source: Neuman (2006:13)

A mixed-methods approach includes a series of research strategies. Creswell and Clark (2007) defined six key strategies that can be used in a mixed method study; they are sequential explanatory, sequential exploratory, sequential transformative, concurrent triangulation, concurrent nested, and concurrent transformative. However, the most appropriate approach chosen for this study is concurrent triangulation, as it uses two different methods, quantitative and qualitative, to "*confirm, cross-validate or corroborate findings within a single study*" (Creswell, 2003:217).

In this study, the need for triangulation arises from the research questions, and thus fulfils the ethical obligation to confirm the validity of all processes. What distinguishes this strategy from others is the process of collecting and analysing quantitative and qualitative data simultaneously, followed by a comparison of these two sets of research findings. This model offers a means to offset the weaknesses inherent within one method with the strengths of the other method.

The rationale for the choice of the above research strategy is set out as follows:

1. The research is to be conducted in the context of the industrial sector in Libya and it is designed to investigate TNA practices in terms of the implementation process of this analysis.

2. Most of the research questions and goals are exploratory in nature, and the investigation is based on technicians, line supervisors and staff responsible for the TNA process, as well as views (perceptions) in the context of the LICs
3. This research approach has been used by other Arab researchers who have conducted studies related to TNA and practices in different contexts
4. The methodological triangulation, which refers to using different data collection methods within one study, can help to boost the reliability and validity of this research (Saunders et al., 2007).
5. The statistical analysis of the quantitative data will make comparison and generalisation possible while the qualitative data will provide an explanation and description of events, actions, attitudes, and behaviours. This will foster the collection of more meaningful data (Bryman and Bell 2007).

As the research adopted a triangulation approach, the data was collected using a range of techniques and from a variety of sources (Yin, 2003; Neuman, 2006). Bonoma, et al. (2008) argues that collecting different types of data from different sources and by different means results in a broader and fuller picture of the phenomenon or unit of analysis under study. Primary data was collected via interviews (qualitative approach) and questionnaires (quantitative approach), while secondary data was gathered from company planning and budget documents, performance appraisals and technical reports. There was a need to collect secondary data to supplement the primary data collected using the research instruments. Given the nature of the topic under investigation, it was necessary to also have access to specific existing data on the companies in order to have a better understanding of how the TNA is implemented and the issues related to its implementation. Background information was also sought on the research problem.

### 4.5.2. Inductive and deductive approaches

Since the current study is also based on interpretivism, it will often require a combination of inductive and deductive methods to achieve a rigorous understanding of the TNA practices currently implemented in the two companies of Libya.

#### 4.5.2.1. Deductive approach

According to Gill, *et al.,* (2011:46), "*A deductive research method entails the development of a conceptual and theoretical structure prior to testing through empirical observation*". They divide the process of deductive research into four stages, namely:

- The researcher identifies the concepts relevant to the subject under investigation. That is, in this case, the experience, attitudes and perceptions of the workers in relation to the implementation of the TNA.
- When a concept has been defined as relevant, guidelines are drawn up to determine how this concept will be observed and how it can be empirically measured. Here, semi-structured interviews and questionnaires are the chosen research instruments.
- Using unambiguous and specific guidelines developed in stage two, hypotheses and theories can now be tested via the collection of empirical data.
- The empirical data is compared with the theories and hypotheses developed by the researcher. This will be carried out in line with previous studies on this topic.

#### 4.5.2.2. Inductive approach

According to Gill, *et al.,* (2011:56), "*Inductive research involves moving from the plan of observation of the empirical world to the constructor of explanations and theories about what has been observed*". An inductive approach starts with the collection of data, which is then analysed. The results of such analysis are used either to formulate a new theory or to confirm an existing one. In either case, the aim is to understand what is going on (Saunders, *et al.,* 2007). Since the main aim of the current research is also to develop an in-depth understanding of the topic under investigation, the inductive approach can be viewed as relevant and useful to adopt.

### 4.5.3. The case studies research method

Yin (2003), states that a case study is most appropriate for probing research questions such as those that begin with "why" and "how". He continues by saying that case studies are a well-known way to conduct an exploratory inquiry, which is the main point of this study.

Abercrombie, *et al.,* (1984: 34) defines a case study as well as its problematic nature as follows:

"*The detailed examination of a single example of a class of phenomena, a case study cannot provide reliable information about the broader class, but it may be useful in the preliminary stages of an investigation since it provides hypotheses, which may be tested systematically with a larger number of cases*".

The above definition justifies the choice of a case study as the methodological backbone of the current research. That is, given the underlying complexity of the research question, this research method seems to be appropriate respect the novelty of the research topic by providing in-depth information which could be used as a stepping stone for future research on TNA in Libya. Bearing in mind the limited access to Libyan industrial companies with a specific aim to undertake a thorough investigation, a case study on two companies could be seen as the best way to meet this objective. Flyvbjerg (2006) further emphasized the usefulness of the case study method as a research tool by pointing out that for many, if not all researchers, the closeness of this method to real-life situations, in this case, the implementation of TNA practices in Libyan companies can produce a multiple wealth of details that are of utmost importance for under-explored research areas. In addition, gathering information from varied sources and perspectives is another main attribute of this research method (Lodico, *et al.,* 2010). Hence using the case study allowed the researcher to incorporate the use of both quantitative (using questionnaires) and qualitative (using interviews) approaches to benefit from a mixed-method approach with the capacity to yield rich empirical data.

The companies selected for this research had headquarters in Misurata city (LISCO) and Mergheb city (NCC) , which have a combined population of 920,000 people, or about 17.5% of Libya's population. Based on the distribution of census results by age and sex groups (up to 25 years) in the two cities is 412,000 people according to the following table 2.1.

**Table 4-2: Libyan population distribution according to age and gender**

| Age | Male | Female | Total | % |
|---|---|---|---|---|
| 25-29 | 49199 | 45187 | 94386 | 23 |
| 30-34 | 45917 | 42509 | 88426 | 21 |
| 35-44 | 59659 | 63986 | 123645 | 30 |
| 45-54 | 35100 | 35405 | 70505 | 17 |
| 55-59 | 7654 | 9216 | 16870 | 4 |
| 60-64 | 9126 | 9247 | 18373 | 5 |
| Total | 206655 | 205550 | 412205 | 100 |
| % | 50.1 | 49.9 | 100 | |

The percentage of contribution for each age group is different between the workers within the industrial companies.

The intended age to participate in the survey was 25 to 65 years old. Through the results of the analysis by age groups of the participants (505) show that the ages from 36 to 45 was 48% while the percentage of contribution  the ages from 46 to 55 was 29.5%. What distinguishes these categories is that they have adequate experience to deal with the questionnaires.

## 4.6. Data collection methods

This study took a two-pronged approach to investigating TNA. The first approach was the use of questionnaires that included close-ended and open-ended questions. Three questionnaires were designed and distributed to three samples of participants: technicians, line supervisors and people who are responsible for training. The second approach used semi-structured interviews with selected samples of participants. Therefore, data was collected from questionnaires and semi-structured interviews. Each method will be discussed in further details in this section. Figure 4.2 below presents the research framework of the study.

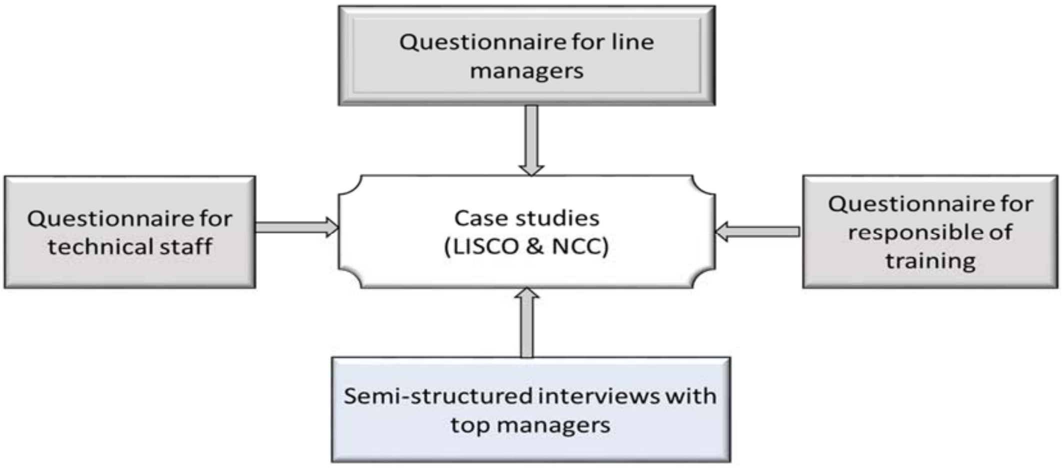


**Figure 4-2: The research methods used in the current study**

The aim at this stage was to obtain as much information as possible from the participants related to the issues under investigation such as the methods of TNA, difficulties encountered and suggestions for the development of the methods used amongst others.

### 4.6.1. Interviews

The aim of interviews is to collect in-depth information about items that have no clear-cut answers. It will also help to interpret and understand the findings which will emerge from the analysis of the questionnaires. Through interviews, the researcher has the ability to give more detailed explanations with regards to the subject under investigation (Bryman and Bell, 2007).

According to Bernard (2000), Bryman and Bell (2007) and Saunders, *et al.,* (2007) there are three types and structures of interviews: unstructured interviews, structured interviews and semi-structured interviews. Selecting one of these approaches depends on the quality of information required. For the purpose of this study, a semi-structured interview guide was used (See Appendix 5). This approach was chosen as the themes and categories of the interviews were already identified from the literature review which helped in designing the survey questionnaire. The interview is also a common technique for collecting qualitative data.

Table 4-3 below links the research questions with the questions from the interview:

**Table 4-3: Links the research questions with the questions from the interview**

| Research Questions | Questions in Interview |
|---|---|
| What methods are used to identify training needs in the studied companies? | Part 3/1/1+2, 3/1/3,3/1/4, Part 4/1+2, 4/3 |
| What problems are experienced by these companies when identifying the training needs of technical staff? | Part 1/2/1+2+3, 2/2/3, 3/1/5, 3/1/6, Part 4/4 |
| Is current practice meeting the needs of individuals and the needs of the organisation? | Part 1/1/1+2, 1/1/3, 2/1/1, 2/1/2, 2/1/3, 2/2/1, 2/2/2, 2/2/4, 3/2/4, 3/2/5, 3/2/3, 3/2/8 |
| How might these companies improve their methods for identifying training needs? | Part 3/2/1+2, 3/2/6, 3/2/7, 4/5 |

This research is designed to deal with line managers, people responsible for training and technicians in the Libyan industrial companies to explore their opinions and perception on training needs analysis in their companies.

#### 4.6.1.1. Semi-structured interviews

In this type of interview, the researcher prepares a list of questions to cover the key themes of the research. Saunders, *et al.,* (2007) argue that semi-structured interviews are used in qualitative research not only to reveal and understand the 'what' and the 'how' but also to place more emphasis on exploring the 'why'. They offer a great scope for discussion and enable the researcher to learn more about the respondents' problems, opinions and views. Bernard (2000:191) suggests that: "*semi-structured interviewing works very well in projects where you are dealing with managers, bureaucrats, and elite members of a community, people who are accustomed to the efficient use of their time*". Since a key aspect of this research is to investigate the opinions and perceptions of managers and trainers with regard to training needs analysis in industrial companies, the semi-structured interview was deemed the most appropriate data collection method.

Using this type of interview the researcher used a question list as a guide to avoid the discussion to take an incoherent route as well as to limit sensitive questions which can be difficult for the participants to respond. Also, questions were carefully selected and worded to minimise any response bias. This research is designed to deal with managers who are responsible for developing and reviewing training needs analyses and to collect their opinions relating to the use of TNAs in industrial companies. Therefore, the researcher will rely on the semi-structured interviews to collect the data for this research. Moreover, researchers from Arab countries have found that this technique is very successful in Arab organisations (Altarawneh, (2005); Bu Qefel, (1998); Alsharari, (2010). They have also found that the managers prefer to be interviewed rather than complete questionnaires (Altarawneh, 2005).

Saunders, *et al.,* (2000) have posited that semi-structured interviews are used in qualitative research in order to encourage discussions to not only reveal and understand the 'what' and the 'how' but also to place more emphasis on exploring the ‘why’. Semi-structured interviews provide a greater scope for discussion and learning about the participants’ problems, opinions and views compared to the other types of interviews (Youssef, 2006).

The interviews conducted were focused on the current situation in LICs (Research Objectives, no., 2 and 5) and have been conducted with managers from different managerial levels as well as training staff.

#### 4.6.1.2. Interview structure contents

The semi-structured interview (Appendix 5) was divided into an introduction and four main parts. The introduction gives the broad outlines of the study, its purpose, its methodology and the expected implications. Part (1) was designed to gather information about the company's background and the interviewee. The subsequent three parts comprised the main body of the interview protocol to obtain the real picture of the TNA practices and to achieve a better and deeper understanding.

Part (2) included human resources development and organisational structure, plans, policies and strategies. Part (3) asked about the needs analysis process. Finally, part (4) was devoted to obtaining the picture concerning analytical methods of training needs. In this part, the researcher formulated questions to gain an in-depth understanding of the methods used and their effectiveness; respondents were also asked for their opinions on how these methods could be improved. Table 4-5 below shows the components of the interview protocol.

**Table 4-4: Semi-structured interview parts and questions**

| Parts | Descriptions | No. of Questions |
|---|---|---|
| 1 | Company's background & the interviewee | 6 |
| 2 | Human resources Development and Organizational structure, plans, policies and strategies | 7 |
| 3 | Needs analysis process | 13 |
| 4 | Analytical methods of training needs | 5 |
| | **Total questions** | **31** |

The interview protocol concluded by asking for any other comments and opinions, which would help the research to explore further themes missed or not available in the existing questions.

Participants were asked to sign the official consent forms (see appendix 5) to ensure agreement of the respondents in order to conduct the interviews.

#### 4.6.1.3. Procedure

Costs, both monetary and time related, are important factors influencing the selection of a specific interview sample (Saunders, *et al.*, 2007). Since this study is of an exploratory nature, participants were selected from four main sectors: Production, Technical Affairs, Administrative Affairs and Services of Financial and Trade in the Libyan Iron Steel Company, and from the training committee and the Administrative and Technical Affairs in National Cement Company.

Taking into account the fact that participants may fail to express their ideas fluently and clearly in English, they were encouraged to use Arabic when necessary.

The researcher obtained a letter from the thesis supervisor and accordingly, the Cultural Attaché in Libyan Embassy issued letters to the selected companies for approval and support to carry out this research. Then, the heads of the board of directors of the two companies circulated these letters to the relevant departments to facilitate the task of the researcher to conduct the interviews. After obtaining approvals to conduct interviews, before the start of each interview the researcher allocated around 15 minutes to the participants to introduce themselves, to explain the research objectives and requirements as well as the purpose of the interview. In order to promote a sense of closeness between the researcher and the participant in every interview, participants were reassured of confidentiality in the sense that they would not be identified by name, and that their data would not be passed to the management of the company or any other authorities. At the end of the interview, the researcher thanked the respondents for their time and participation.

The researcher adopted five rules to ensure the success of the interviews and they were:

1. The careful selection of participants who can provide the information required to meeting the objectives of the study according to an assistant from the HR department in each company.
2. Making sure that each participant returned a signed consent form which contained information about the interview process; that is, voluntary participation and their right to withdraw.
3. The provision of a copy of the interview form to participants so they know what to expect.
4. Explaining to the participants at the beginning of interviews that their participation will contribute to specific research objectives.
5. Making sure that before ending the interview, the researcher provided each participant with an opportunity to debrief and discuss their interview and the research in general.

Ensuring that the participants understand the research process is important in terms of achieving the research objectives.

**1) Conducting the interviews**

Gaining access to companies and participants was not a straightforward process. The Libyan Iron and Steel Company at its headquarters on the outskirts of the City of Misurata is about 18 km away from the center. The National Cement Company's headquarters is in the City of Alkhums. The distance between these two cities is around 110 km. This was problematic from the start to the end of the interviewing process.

The researcher started the interviews according to a list which included 20 interviews that were prepared after obtaining approvals from both companies. Oberle (2002) states that the exact number of participants required for qualitative research can often not be specified before the study is conducted. Eltaweel (2011:129) recommend a sample selection and stated that "*sampling is terminated when no new information is forthcoming from new participants". Based on this, the* *researcher continued until "the point of data saturation was reached*", and the information collected was enough to achieve the research aims and objectives.

### 2) Participants

The participants were selected according to their level of responsibility and their participation in training committees. The table below shows the interviews with a number of managers and senior officials in both of the two companies.

**Table 4-5: Interview details**

| No | The companies and Job role | | Date | Method |
|---|---|---|---|---|
| 1 | LISCO | Director of Research and Development | 10/08/2012 | Audio recorded |
| 2 | | General Director of Personnel Affairs | 10/08/2012 | Notes |
| 3 | | Department of Planning and Maintenance | 12/08/2012 | Notes |
| 4 | | Head of Technical Education | 12/08/2012 | Audio recorded |
| 5 | | Head of Training Centre | 21/08/2012 | Notes |
| 6 | | Responsible for Technical Affairs Sector | 21/08/2012 | Audio recorded |
| 7 | | Director General of Financial Management | 21/08/2012 | Audio recorded |
| 8 | | Director of the Department of Management | 30/08/2012 | Notes |
| 9 | | General Director for Steel | 30/08/2012 | Notes |
| 10 | NCC | Head of Personnel and Training/F-1 | 10/09/2012 | Audio recorded |
| 11 | | Director of Management of Personnel/F-1 | 10/09/2012 | Notes |
| 12 | | Head of Personnel and Training/F-2 | 12/09/2012 | Notes |
| 13 | | Director of Management of Personnel/F-2 | 12/09/2012 | Notes |
| 14 | | Head of Training Department | 15/09/2012 | Notes |
| 15 | | Head of Personnel and Training/F-3 | 15/09/2012 | Audio recorded |
| 16 | | Director of Management of Personnel/F-3 | 17/09/2012 | Audio recorded |
| 17 | | Member of training committee | 17/09/2012 | Notes |

In this study, all the interviews were conducted during official working hours and in the participants' offices after having chosen the time and place of the interviews bearing in mind that they were very busy with the running of the companies. Interviews were conducted in Arabic as it is the mother tongue of both the participants and the researcher. This enabled participants to eloquently and fully express their thoughts and opinions and also allowed for a good rapport between the participants and the researcher to be developed. They were then translated into English in preparation for analysis. Data analysis revealed similarities and differences in the data, common patterns as well as any anomalies. The process of downloading seven recorded interviews has been slow and difficult; in fact, this stage was very time-consuming.

Each interview lasted between one and one and a half hour. Just seven of the seventeen interviews were voice recorded. This number is considered to be reasonable, especially if we take into account employees' caution in expressing themselves freely and also, the interview, as a data collection technique is not as familiar in Libya as questionnaires (Elhensheri, 2009).

The objective of using digital recording was to ensure that all important points were taken and hence not missed. Also, it allowed the researcher to listen to the each interview as many times as necessary in order to have a very good understanding and interpretation of the data. However, a few participants did not give permission for their interviews to be recorded. This can be attributed to the society’s cultural background resulting in some form of communication barrier and which is quite common in Arab societies. For cultural reasons, the recording of interviews has been proved to be difficult in some areas of the Libyan environment in previous research (Eltaweel, 2011). After each recorded interview, the researcher spent more than five hours transcribing each of the interview transcripts. The interviews that were not recorded took more than three hours to rewrite and were supplemented with handwritten notes in order to avoid the loss of words and their meanings.

### 4.6.2. Questionnaires

The questionnaire survey design is a form of quantitative research as it presents a quantitative description of the tendencies or opinions of people through studying a sample of a population (Creswell, 2007). The questionnaire was designed to help to answer the research questions, which are all related to training needs analysis in Libyan industrial companies. Questionnaires also helped in exploring employees’ attitudes towards their own practices. The survey, typically in the form of a questionnaire, is one of the most popular methods of collecting data on opinions, attitudes, beliefs, and motivations from a large group of participants (Gass and Mackey, 2007).

Questionnaires are commonly used in social and educational research (Blaxter, *et al.,* 2006) and are often combined with interviews. This mixed-method approach has also been adopted in the current study. Sekaran (2003) posits that questionnaires are an efficient data collection mechanism when the researcher knows exactly what they are looking for, which was also the case for this research work. According to Sekaran (2003), Saunders, *et al.,* (2007), Bryman and Bell (2007) as well as Moore (2006), since a researcher usually obtains the same kind of data from all respondents when using a standard questionnaire, this facilitates the process of making comparisons. As such, in the current study, the researcher was able to compare data from the two studied companies in order to strengthen the understanding of the topic. Quantitative methods such as questionnaires are distinguished by a high level of data accuracy as well as providing factual information. Moreover, the researcher is independent during the completion of the questionnaire by the respondents and thus does not affect the research subject (Bryman and Bell, 2007). This advantage was relied upon in the current study to maintain an objective empirical approach. Another benefit of using questionnaires is the ease of administration. Their usefulness can also be maximized by combining them with other methods, as is the case in this study.

However, there are also a number of disadvantages of personally administering questionnaires. For example, administering questionnaires to a large number of geographically dispersed respondents (particularly if they are abroad) is more expensive and more time-consuming than other data gathering techniques. For this reason, it was decided that in this study, only two locations (Misurata and Elkumes) would be targeted. Ticehurst and Veal (2000:49) also came up with a note of caution whereby "*questionnaire-based surveys should only be used when quantified information is required concerning a specific population and when individuals' own accounts of their behaviour and attitudes are acceptable as a source of information*". Other disadvantages of questionnaires are a low response rate (Saunders et al., 2007) and the inability to clarify any misunderstanding or to offer further explanations.

For the purpose of this study, using close-ended questions, three questionnaires were developed in order to collect data from three main sample populations to reflect on the TNA process in the LIC. These were the technicians, the line supervisors and people in charge of training. The three questionnaires had the same concept but were worded differently. In order to answer the research questions each questionnaire was split into two parts: the first section was designed to collect personal data about participants and the second section aimed at gathering information on the training needs analysis process related to the actual practices and the key challenges faced by practitioners in the implementation of TNA effectively as well as being sensitive to any proposals and comments on the subject. Table 4.6 below links the research questions with the different questions used in the questionnaire:

**Table 4-6: links the research questions with the different questions used in the questionnaire**

| Research Questions | Questions in Questionnaire | | |
|---|---|---|---|
| | A | B | C |
| What methods are used to identify training needs in the studied companies? | 13,16,17, 18,19,25 | 14,28,29, 34 | 24,26,31 |
| What problems are experienced by these companies when identifying the training needs of technical staff? | 15,22 | 15,17,18, 21,22,31, 32 | 18,19,28, 29,30 |
| Is current practice meeting the needs of individuals and the needs of the organisation? | 11,12,14, 20,21,23, 24 | 11,12,13, 19,20,23, 24,25,26, 27, 30 | 13,14,,20, 22,23,27 |
| How might these companies improve their methods for identifying training needs? | 26 | 16,33,35 | 25,33,32 |

### 4.6.2.1. Questionnaire design

Planning and designing are one of the most critical stages in the questionnaire process. The aim is to translate the research objectives into specific questions. The answers to these questions, that is the data, should answer some or all of the research questions. In this study, the questionnaire was designed to extract information from people who have an understanding of TNA, that is, the employees in industrial companies in Libya. This was essential in terms of addressing the central research questions. The main purpose of collecting the basic ideas of these practices is to identify the gaps between models and what actually happens in practice. All participants were asked to express their opinions and attitudes related to the TNA in practice as well as solutions which they would suggest in order to improve the effectiveness of TNA.

Bryman and Bell (2007) identify some essential principles the researcher should follow when drawing up questions and these were carefully considered by the researcher in the current study:

- Questions should be clear and unambiguous, providing an adequate frame of reference.
- They should use simple language wherever possible and avoid jargon.
- Generally, questions should be kept short, but they do need to be able to prompt responses, particularly in relation to behaviour.
- Double-barreled questions, in which the respondent is asked about two things in one question, should be avoided.
- Questions should not contain negatives, as they are subject to misinterpretation.
- Leading and presumptive questions should also be avoided.

Hence, when designing the questionnaires, the researcher selected specific topics related to the topic under investigation and has produced a questionnaire that can be easily understood by participants. To ensure this, several readability checks have been performed on the questionnaire. As such, the questionnaire included open and closed questions based on a clear and concise wording that was accurately translated. The open-ended questions gave respondents the opportunity to express their own opinions while the closed questions required them to select from the available options the answer that best reflected their views (see Appendix 6, Questionnaires (A), (B) and (C). The design of the questionnaire in the current study was guided by the literature on training needs analysis, including studies by Elfazani (2011), Abdulrahim (2011), Yuseif (2010), Altarawneh (2005), Bu Qefel (1998), and Alsharari (2010).

**1) Structuring the questionnaire**

Before constructing the questions in the questionnaire, the researcher carried out an extensive review of previous studies for the training needs analysis and the environmental influences on the practices within the context of Libya.

To start with, an extensive review of studies in similar contexts was carried out. In an attempt to avoid of what is commonly known as “re-inventing the wheel” some of the questionnaire items were based partially on studies related to Human Resource Development (HRM) (for e.g., Elfazani, (2011); Abdulrahim, (2011); Yuseif, (2010); Altarawneh, (2005); Bu Qefel, (1998); Alsharari, (2010). Every effort was made to make all the items in the questionnaire unambiguous, answerable, and simple with an uncluttered format that involved no embarrassing or biased questions.

Some of the questions were written as attitude statements, that is, three questions in each section of the questionnaires. This type of question is generally used as it seems to be specific and effective in measuring attitudes. Each questionnaire ended with the following statement: "*Do you have any comments or suggestions on training needs analysis?*". This was an attempt to give the participants the possibility of providing any additional information or further comments.

#### 4.6.2.2. Questionnaire contents

It could be said that the questionnaire includes many questions aims to achieve research objectives. Therefore, each questionnaire includes everything related to TNA in the selected companies (see appendix 6).

A questionnaire was prepared and printed with an appropriate covering letter explaining the aim and the important of study, encouraging participations to cooperate by providing accurate data, urging the return of the completed questionnaire, and assuring them of the confidentiality of the information.

For the purposes of this study, three questionnaires (A, B and C) were developed in order to collect data from three main sample populations to reflect on the TNA process in the LICs. These were the technicians, line managers and those responsible for training. The three questionnaires had the same concept but were worded differently according the situation of each type of participants. Each questionnaire is divided into two parts, which are (1) Information about the participants, the aims to collecting data on respondents such as gender, age, educational level, current jobs, and previous experience. Part (2) is training needs analysis, the respondents were asked questions related to training needs indicators, difficulties and challenges to training needs analysis, methods and techniques used in conducting TNA and the levels that determine the training needs, TNA process in practice. Also, company efforts in training process and when is training provided for employees. In this part where focus is on methods and techniques used in identifying training needs and the level of respondents' satisfaction through training programmes. Also, asked for respondents to identify the challenges faced TNA process and their suggestions to improve methods of training needs. In all parts most of questions are closed questions to guiding the respondents to choosing from the answers provided. also, they can complete them relatively quickly and they facilitate analysis.

Each questionnaire ended with the following statement: "Do you have any comments or suggestions on training needs analysis?". This was an attempt to give the participants the possibility of providing any additional information or further comments.

At the end of each questionnaire, the researcher thanks participants for their cooperation and assistance in completing the questionnaire.

#### 4.6.2.3. Selection of the participants

The population selected was based on the directory of industry in Libya that is issued by the Ministry of Industry (2008). The two companies were chosen for a number of reasons:

1. The researcher audited the LISCO between 1991 to 2002 and established contacts with most of the company's key staff. This was critical in enabling him to gain access both to the staff and the required archival material, as well as to communicate with interviewees and other employees.
2. The Libyan Iron and Steel Company (LISCO) is located in Misurata. The site comprises three midrex direct reduction mills, two steel melt shops, a light and medium section mill, a hot strip mill, a cold rolling mill, a galvanizing line, and basic utilities. A pioneer in the application of quality systems, it was one of the first companies in Libya to receive an ISO 9000 certificate which made it one of the main pioneers of the application of quality systems. It is the only company in Libya specializing in the manufacture of different types of iron and steel at all different stages starting from the iron pellets and scrap to iron construction and Industrial iron. In fact, it is the largest employer in the non-oil industrial sector.
3. The National Cement Company (NCC) is the largest cement company in Libya. This company is owned by the Libyan Government and it is one of the main cement companies in Libya with eight factories; four cement factories not far from the Capital Tripoli, two in Alkumes (Libda and Mergeb), one in Zleten and one in Suq-Alkhames. All of the cement produced is for internal consumption and goes towards building Libya's infrastructure. It is one of the largest

companies in western Libya and one of the largest cement producers in North Africa (Graisa and Al-Habaibeh, 2011).

4. Both companies are committed to training, developing activities and running training centres and training programmes.
5. Most of the managers in these companies believe that the training and the development of employees is a significant factor in achieving organisational success. As such, these companies possess a climate which can be associated with the aims of this study and was as such worthy of exploration.
6. The number of big companies in Libya is around 88 companies by economic activity according to a national survey in 2009. Those two companies contribute 50% of the total output of big companies while the employees of both companies are estimated to be about 33% of the total employed in those big companies.
7. The companies differ in terms of size, an area of activity, tasks and geographical location, but both play an important role in the Libyan manufacturing industry and the country's economy.

Frequent visits were made by the researcher to the two selected companies. The samples of line supervisors and those responsible for training came from those companies. The researcher also relied on the organisational structure of the companies in determining the samples of the managers in the technical field who participated in this survey in order to meet the requirements of this study.

Samples were selected from the LISC as follows: 10 technicians were selected from departments of less than 100 and 15 from departments comprising more than 100. Samples came from management, production, technical affairs, services affairs, as well as financial and business affairs. The same method was used to select a sample from the NNC.

Seven hundred and forty questionnaires were distributed among the technical staff including technicians, line supervisors, and those responsible for training in the two companies. This selection was based on Krejcie and Morgan's (1970) table for determining the appropriate sample size (see Appendix 1). The size of the sample according to table is 664 and where anticipated the return rate of questionnares =

90%. The minimum drawn sample size is 664/.90 = 738 questionnares as shown below in the Table 4-5.

**Table 4-7: Number of company employees and technical staff**

| Name of company | Company employees | Number of employees (Technical staff)[1] | Recommended Sample[2] | Number of questionnaires |
|---|---|---|---|---|
| Libyan Iron Steel | 6700 | 5433 | 358 | 470 |
| National Cement | 3000 | 1658 | 312 | 270 |
| Total | 9700 | 7091 | 670 | 740 |

[1] **(LISCO, 2012) and (NCC, 2012)**

[2] **Based on Krejcie and Morgan's (1970) formula**

*The formula:

Sample size = $X^2$ *NP (1-P)* ÷ $d^2$ *(N-1)* + $X^2$ *P(1-P)*

$X^2$ = (3.841).

$N$ = the population size.

$P$ = 0.50

$d^2$ = 0.0025

LISCO, Sample size =3.841x5433x0.50(1-0.50) ÷ 0.0025x5432+3.841x0.50(1-0.50)

= 5217 ÷ 14.54 = 358

NCC, Sample size =3.841x1658x0.50(1-0.50) ÷ 0.0025x5432+3.841x0.50(1-0.50)

= 1592 ÷ 5.10 = 312

From Table 4-9, it could be argued here that the questionnaires were returned is (677) are about 92%, that this result more than our prediction but the validity questionnaires (505) are about 74.6% .

### 4.6.2.4. Procedure

#### 1) The cover letter

The covering letter introduced the research and the researcher. It also informed the respondents that the purpose of the survey was to collect data about the topic under investigation and also made it clear that the responses would be used only for research purposes. In order to encourage honest responses, participating employees were not asked to reveal their names. The letter also assured that all the information collected will remain strictly confidential and that it will be used for no other purpose. Also, the letters issued by the Libyan embassy cultural attaché in London that addressed the management of the selected companies was an important factor in obtaining the necessary support of the departments responsible for these companies. After gaining consent from the heads of the board of directors, the researcher witnessed a positive cooperation on behalf of all officials in the companies without any exception.

**2) Questionnaire translation**

Gass and Mackey (2007) recommend that researchers in foreign language contexts should administer questionnaires in the original language of participants. Therefore, an accurate translation of the questionnaire from English to Arabic by experts in languages was deemed important in the current study. This would ensure that each word and every question was accurately put to the participants. The first version of the questionnaire was written in English and then translated by the researcher into Arabic. The researcher's translation was checked by a professional editor and proof-reader. The cultural references of some phrases were taken into consideration and carefully treated. The layout of the original questionnaire was kept intact to ensure the meaning was clear and that it had not been altered in the course of translation.

**3) Piloting the questionnaire**

Piloting is a pivotal process and allows for the checking of suitability, validity, and practicality of any research tool (Neuman, 2006). Therefore, after finishing the first draft of the questionnaire and before administering it to the true sample, a pilot study was conducted. The questionnaire was first piloted by two technicians studying in the United Kingdom. As a result, several items were rephrased, deleted, or reordered when necessary.

The first draft of the questionnaires was given to a small sample (14 participants) to check the clarity of the statements and their comprehension. The respondents were also asked to provide any comments and/or any suggestions to improve the questionnaire. The responses resulted in a number of comments, and most of these were taken into consideration before finalizing the questionnaires. According to the views of the participants, minor changes were made to the wording of some of the questions to make them more understandable. The feedback helped in enhancing the questionnaire at various points.

### 4) Administering the questionnaire

Three sets of questionnaires were distributed and the questionnaires were delivered to the workplace by hand. Seven hundred and forty questionnaires (comprised of Forms (A), (B) and (C) were distributed. Six hundred and seventy-seven were returned, of which 505 questionnaires were completed and suitable for analysis.

**Table 4-8: The statement of questionnaires**

| No | Company | Statement | A | B | C | Numbers | Total |
|---|---|---|---|---|---|---|---|
| 1 | Libyan Iron and Steel Company | Distributed | 265 | 125 | 80 | 470 | 322 |
| | | Returned | 251 | 119 | 65 | 435 | |
| | | Validity | 210 | 71 | 41 | **322** | |
| 2 | National Cement Company | Distributed | 165 | 60 | 45 | 270 | 183 |
| | | Returned | 153 | 56 | 33 | 242 | |
| | | Validity | 122 | 40 | 21 | **183** | |
| Total questionnaires were completed | | | | | | | 505 |

The questionnaires were administered by internal mail to employees in the companies. The researcher followed up the responses by liaising with the training department of the Libyan Iron and Steel Company and the management department of the National Company for Cement.

The questionnaire was designed to gather the perspectives of technical and managerial staff with regard to the nature of TNA, in accordance with research objectives 2 and 3 (to provide a deeper and wider description of current TNA practice and to explore and identify the key factors involved including barriers affecting TNA in Libyan industrial companies).

The administrative management in both companies agreed to distribute the questionnaires formally by internal mail. The researcher believed that it was a good way to ensure commitment in filling out the questionnaires and returning them on time. It was decided to be distributed in three stages: firstly (A), followed by (B), and subsequently (C) with a reminder to the respondents to return the completed questionnaires within the next three weeks.

Table 4.7 shows some important information relating to the distribution of the questionnaires. There were 740 questionnaires sent to the participants. 677

questionnaires were returned, and the final rate of response was 96.7%. After investigating and filtering the data, it was evident that there were 505 questionnaires suitable for analysis. The rate of total response was then 74.6 %.In the Libyan Iron Steel Company, the response rate was 67.1%. 470 questionnaires were distributed and 292 questionnaires were completed and collected. On the other hand, in the National Cement Company, the response rate was 88% with 270 questionnaires that were completed and collected.

**Table 4-9: Distributed questionnaires**

| No | Company | Numbers | | | | | |
|---|---|---|---|---|---|---|---|
| | | **Distributed** | **%** | **Returned** | **%** | **Validity** | **%** |
| 1 | Libyan Iron and Steel Company | 470 | 64 | 435 | 64 | 322 | 64 |
| 2 | Cement National Company | 270 | 36 | 242 | 36 | 183 | 36 |
| | **Total** | **740** | **100** | **677** | **100** | **505** | **100** |

The rate of response was high thanks to the method used in the distribution process and the follow-up by the researcher along with the competent departments involved.

The questionnaires were distributed and full freedom was given to the respondents to express their views without any intrusion on the researcher's part to avoid any form of bias. The typical response time to the questionnaire was about 40 to 60 minutes, according to the pilot study.

After a thorough discussion with the HR departments of both companies, it was decided that the training departments would distribute the questionnaires to the three sample groups. A cover letter was attached explaining the purposes of the study and a request for the questionnaires to be completed within ten working days. In order to ensure a rapid response and to avoid confusion, the three questionnaires (Forms A, B and C respectively) were distributed during a specified period. Stamped envelopes were sent together with the questionnaires and the researcher and the training teams contacted the various departments to follow up.

## 4.7. Data analysis

Data analysis enables the researcher to make sense of the overall picture and to spot emerging themes; it provides meanings for the researcher and readers (Gill and Clark, 2011). The data analysis is discussed in two sections: interview data analysis and questionnaire data analysis.

### 4.7.1. Descriptive analysis

The descriptive research attempts to systematically describe the situation, problem or phenomenon and the attitudes of those affected by it (Kumar, 2005). Elsaatea (1993:78) gives a comprehensive definition of the descriptive approach:

"*The descriptive approach is based on the study of the phenomenon as it really is and seeks to describe it accurately in both quantitative and qualitative terms; the qualitative data describes the phenomenon and illustrates its properties, while the quantitative data gives us a numerical description of the phenomenon and illustrates its amount and dimensions*."

The above author suggests that the survey and case study methods are particularly suited for the descriptive approach. Hafeed and Bahe (2000:92) explain that "*the case study method allows in-depth research into the factors that affect individual and group behaviour (at family, institution or community level) and that influence the relationship between individuals and their environment*".

This study is descriptive, in that it aims to describe the approach to TNA that has been adopted by two industrial companies in Libya. Data was gathered through interviews and a questionnaire survey that was distributed to the staff in these companies.

#### 4.7.1.1. Questionnaire analysis

Questionnaires that had no responses or a large amount of missing data were disregarded, hence leaving a total sample of 505. The set of three questionnaires was analysed quantitatively using SPSS (Statistical Package for Social Sciences), a widely used and accepted computer programme. Due to the large numbers of technicians participating in the study, it was difficult to deliver the questionnaire to them in person. As such, as previously mentioned, the researcher distributed the questionnaires to the participants via internal mail.

The analysis of the questionnaires was carried out addressing the following aims:

1. To identify the perceptions of line supervisors, those responsible for training and technicians about the current TNA programme.
2. To identify any differences there might be among and between respondents in their perceptions of the objectives of the TNA programme.

### 4.7.2. Interview analysis

The data collection, transcription and analysis were all conducted by the researcher. The data gathered was preserved in textual forms, digital recorder and through documents. To analyse the qualitative data the researcher used inductive thematic analysis.

#### 4.7.2.1. Inductive thematic analysis

Guset, et al., (2013:13) have argued that inductive thematic analysis *"is probably the most common qualitative data analysis method employed in the social, behavioral, and health sciences. The process consists of reading through textual data, identifying themes in the data, coding those themes, and then interpreting the structure and content of the themes in the data"*. Moreover, Braun and Clarke (2006:6) identify the thematic analysis as *"a method for identifying, analysing, and reporting patterns (themes) within data"*. The authors have also highlighted that whilst thematic analysis is widely used, there is no clear agreement about what thematic analysis actually is. However, they believe there is no one ideal theoretical framework for conducting qualitative research, or indeed one ideal method. Thematic analysis can be an essentialist method that shows the experiences, meanings and participants' individual realities (Braun and Clarke, 2006). This type of analysis involves a set of procedures designed to identify and examine themes from textual data in a way that is transparent and credible (Guset, et al., 2013). It is generally used to analyse interviews for a number of reasons: firstly, the themes can be identified within the explicit meanings with the analyst not looking for anything beyond what a participant has said and also, this qualitative analysis technique offers some flexibility around the interpretation of the data (Braun and Clarke, 2006).

Braun and Clarke (2006) have provided a six-stage guide on how to conduct a thematic analysis, which the current study relied upon to make sense of the qualitative data:

1. Repeatedly reading interview transcripts.
2. Preparing a list of ideas about what is in the data and what themes are interesting.
3. Identifying relevant themes of all the data collected.
4. Reviewing themes to consider whether they appear in a coherent pattern.
5. Defining, naming final themes and describing the scope and content of each theme in a couple of sentences.
6. Writing the report and providing enough data and evidence of the selected themes, and choosing specific extracts to be embedded within an analytic narrative.

Therefore, in line with the aforementioned proposed model of qualitative data analysis, for the current study notes were taken during some of the interviews, while others were recorded and transcribed. Steps were taken to maximize the chances of success. For example, the interviews were conducted in Arabic, the native language of both researcher and participants, to ensure a clear and unambiguous communication; and they were long enough to allow participants sufficient time to think and the researcher to make notes and observations. The selection of the semi-structured interview schedule (in which questions are formulated in advance) facilitated the process of qualitative analysis to some extent.

Sekaran (2003) stated that there are three steps in the preliminary analysis: the first is the identification of the main themes and the categorization of the material; the second is the categorization of information in more specific terms and the presentation of the results in some form (such as graphs); and the last concerns the explanations – finding links and drawing conclusions that relate to the original research objectives and questions.

All the interviews were analysed in line with the following seven steps:

1. All the interview transcripts were translated from Arabic into English by the researcher. The translation was revised with the assistance a qualified Arabic/English translator in order to ensure the accuracy of the translation.
2. Reading and re-reading all interview transcripts, notes, and other data in order to become very familiar with the data was also part of the process (Huberman and Miles, (2002) as cited in Elfazani, (2011). At this stage, preliminary codes or ideas were noted in order to generate an initial understanding of what the interviewee reported.
3. Data was compressed into emerging themes via comprehensive coding systems and further compressed into meaningful categories.
4. At this phase, the researcher combined the different codes that emerged from the previous phases to come up with a theme (general code or category).
5. In this phase, the researcher looked into whether these themes were relevant in providing an answer to the research questions (supporting the theoretical perspective).
6. Explaining the theme in some cases can be explicit and straightforward. However, at times, they could also be ambiguous.
7. The analysis of the data involved attaching relevant parts or chunks of data, in the form of a number of words, a sentence, a paragraph or sometimes a complete answer to a particular question asked in the interviews.

Based on the above steps, the thematic analysis of the interview data yielded a series of different themes and categories, to be explained in the next chapter.

## 4.8. Difficulties during fieldwork

The protests which started on 17 February 2011 escalated into a full-scale revolution which temporarily halted the activities of most industrial organisations in the areas where there was fighting. Libya’s liberation was announced on 23 October 2011, but many organisations have still not fully resumed their activities, including LISCO and the NCC. There are a number of reasons for this; many employees left their companies to join the rebel forces, only to be killed or injured in the war. Furthermore, facilities were left damaged and companies were left without the financial liquidity required to cover current expenses and necessary repairs. This situation has affected most aspects of industrial activity. With the above situation, the researcher encountered many difficulties whilst carrying out fieldwork, including the following:

1. The interviews were not always permitted by interviewees to be recorded as they feared such recording may be passed on to their superiors
2. Despite the researcher having official endorsement from the Libyan Embassy in London and highlighting the importance of this study, many of the senior managers still refused to participate due to time constraints
3. Many participants were extremely busy due to the daily running of their work. Consequently, the researcher had sometimes to wait for a long time before starting an interview and many interviews were interrupted by job-related telephone calls or visitors
4. Mobile and Internet networks did not cover all areas in Libya and, therefore, contacting participants were sometimes an issue
5. There was some difficulty in the process of recording interviews, filling out forms for the interviews, and taking notes at the same time. As a result of some of the participants' work situation, the researcher had to stop recording at certain points. This affected the flow of some interviews and possibly some of the data that was collected (or missed)
6. The distance between the two companies headquarters is about 110km; this was also problematic as the researcher had to travel to and from these locations to carry out interviews and distribute/collect questionnaires. The lack of public transport between cities led to some data/participant attrition. This also proved costly in terms of time and money.

## 4.9. Validation of the research methods

It is often very useful to conduct a pilot study before beginning the research study. Validation is a stage that enables the researcher to explore in advance any issues that might be problematic in the future.

- **questionnaires**

To maximise positive results, the validation was important to discover any potential problems regarding the design of the questionnaire, particularly its accuracy, clarity, length and compliance of questions to the study investigation.

Validation is often used to discover weak points in the questionnaire design in terms of validity and reliability, and the following stages were carried out to achieve this:

1. In relation to the first stage of the pilot study, in order to receive helpful and constructive feedback regarding the questionnaire, draft copies of the three questionnaires (A), (B) and (C) of the preliminary questionnaire were handed to the supervisors and colleagues (PhD and Master students) who have an adequate understanding and knowledge of HRD issues in Libya. In the second step, nine copies of draft questionnaires were distributed i.e. three copies from each type in LISCO.
2. The critical discussion was held with all: supervisors, colleagues and LISCO group. The feedback received provided several useful suggestions and insights that helped in enhancing the questionnaire at various points and some changes were made to the wording of individual questions and the layout of the questionnaire, which were taken into consideration in the final copies.
3. The questionnaires were edited first in English and then translated into Arabic by the researcher. The accuracy of the Arabic translation was checked and approved by a legal translator from English to Arabic and vice versa.
4. The final draft of questionnaires was prepared and printed with an appropriate covering letter explaining the aim and the important of study, encouraging participations to cooperate by providing accurate data, urging the return of the completed questionnaires, and assuring them of the confidentiality of the information. The questionnaires were subsequently widely distributed, and the typical response time to the questionnaires was a approximitly 1 hour to complete.
5. Corporate training departments through departmental directors distributed questionnaires. The researcher has personally overseen the distribution and was able to introduce the questionnaire and explain any uncertainty about questions, and provided a phone number to be contacted on in case of further queries.

- **Questionnaire reliability**

  Reliability of a measure is an indication of the stability and consistency of the instrument (Altarawneh, 2005). Reliability refers to the extent to which a measuring procedure provides the same results on repeated trials (Sekaran, 2003). Cronbach's Alpha is commonly used to investigate the internal consistency (reliability) to which the items are homogeneous of the questionnaire. The author has used "SPSS" statistics (Version 22:2013) for the test the reliability statistics in this study. This software will generate one number for Cronbach's alpha. Similar to the correlation coefficient, the closer it is to one.

To test the reliability of results illustrated that Cronbach Alpha the average values of three questionnaires were 0.719 see table which is a number higher than the minimum limit 0.70.

**Table 4-10:** Cronbach’s alpha for each questionnaires

| No. | Questionnaires | Number of questions | Cronbach's alpha |
|---|---|---|---|
| 1 | Questionnaire (A) | 24 | 0.722 |
| 2 | Questionnaire (B) | 38 | 0.715 |
| 3 | Questionnaire (C) | 38 | 0.721 |
| **The average** | | | **0.719** |

A reliability coefficient of alpha 0.70 or higher is considered acceptable in social research (Saunders, et al., 2007). As the results are within the acceptable range, the researcher can have confidence in the results of the analysis.

❖ **Interviews**

The second data collection method used for this research study was qualitative data utilising semi-structured interviews. This selection is determined by the research objectives, these require the discovery and the exploration of TNA process in LICs. Elfazani (2011:120) asserts that *"semi-structured interviews method is the most popular method utilised by the majority of researchers and social scientists in the Arab world in the investigation of empirical work"*.

The following will explain the validity process. For the purpose of testing the validity, objectively and clarity of interview questions. The following stages were carried out:

1. As we have done with questionnaires, the draft copies of the interview protocol were handed to the supervisors and colleagues (Ph.D. and Master students ) who have an adequate understanding and knowledge of HRD issues in Libya. In order

to detect any unclear interview, questions and the questions were comprehensive enough to answer the research questions.

2. Following the feedback, which showed several useful suggestions and insights that helped in enhancing the interview protocol at various points and some changes was made to the wording of questions and the layout of the protocol, which were taken into consideration in the final copy.
3. The researcher translated the interview protocol into the Arabic language, it was revised by a legal translator from English to Arab and vice versa to ensure the accuracy of the translation.
4. Based on this, the researcher carried out 4 pilot interviews using a digital voice recorder and taking notes during the recording process, which started in June 2012, and finished in July 2012. when considering the answers and comments of the interviewees, no major problems were found in the interview protocol. Some amendments were made to the interview protocol, which were also used to measure the time required to conduct the interview.
5. Some comments were taken into account and amendments to some of the questions were made. For example, the question No. 5, part 3, section 2 was deleted. When does training is offered to employees of the company?, add how when answer yes and why when answer no in the question No. 4 and 5 part 3, section 1, question 1, part 3, section 2.
6. The seven recorded interviews were downloaded from the digital voice recorder to a computer and then converted into interview transcripts in Arabic.

## 4.10. Model development

The current research method adopted in the study is based on the theoretical model (see Figure 4.3) of Blanchard and Thacker's 2003 model and Goldstein and Ford’s 2002 model, which support a holistic approach to TNA. The model requires analysis of the three levels; (organisational, operational, and individual).

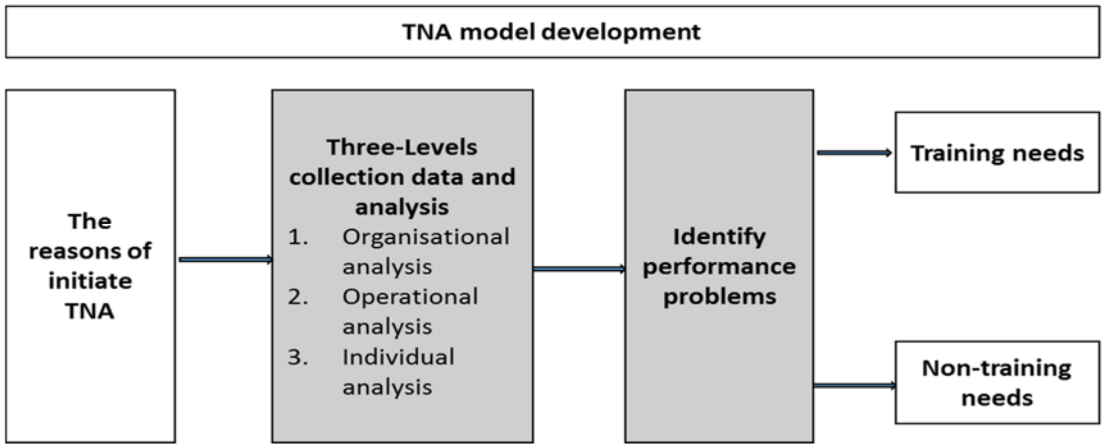


**Figure 4-3: TNA model development**

The organisational analysis investigates its objectives, goals and resource need to determine where training is needed within the organisation. The operational analysis examines how tasks are performed and what knowledge and skills are needed to perform those tasks, this help to determine the content of training programmes. Finally, through individual analysis, the organisation identifies who should be qualified to receive the training. This is achieved by knowing the actual level by performance appraisals for each employee comparing with performance standards required.

To develop a model for needs assessment in the industry of iron, steel and cement to fulfil the objective of this research, models were developed to determine the training needs of the staff such as technicians. This model was achieved and supported through a wide-ranging literature review on TNA and the results by analysis the questionnaires and interviews.

In this study, it has been proposed that a TNA model for LICs is divided into four stages: initiate, three-level analysis, data collection and identify performance problems. Chapter 10 will provide detailed discussion on the framework development process for this research project.

In this study, there was the evaluation of the proposed model to determine training needs of technicial staff. Ten experts in TNA were willing to participate in the evaluation of the model and provide their feedback. The researcher gave a presentation to explain the model and its features and after that, they completed the questionnaire, followed by open discussions to obtain further feedback and suggestions from all participants.

The next chapter will focus on two organisations in Libya – LISCO and NCC – looking at their policies and strategies, the TNA process and how it is implemented in each organisation.

# Chapter 5. Case Study Organisations

## 5.1. Introduction

To achieve the aim of this study, it is important to provide a clear detailed description of the process of identifying training needs in the selected companies and to achieve the objectives a case study approach is adopted which will provide a descriptive analysis of the organisational context of the companies. The companies being analysed are the Libyan Iron and Steel Company (LISCO) and the National Cement Company (NCC), which are the largest companies in the Libyan manufacturing industry, and have good training programmes for staff and workers. This chapter provides an overview of the activity of each company and the composition of the company's management and organisatioal structure. This chapter also presents the policies and strategies of training, and as well as T&D, and implementation of the process of TNA and the factors influencing them. Various findings regarding TNA practices, mainly obtained from questionnaires, interviews and documents will be described to demonstrate the reality of TNA, and the extent of the commitment to implement TNA theories.

## 5.2. Case study A: Libyan Iron and Steel Company (LISCO)

### 5.2.1. An overview of the company

LISCO was established in Libya by an Act of the Council of Ministers number 669/1991 as a public joint-stock company, and under the supervision of the Ministry of Industry. LISCO is located near the city of Misurata, (approximately 210 km East of Tripoli) on an area of 1,200 hectares, and is one of the largest iron and steel making companies in North Africa, and one of the leading companies in the Libyan industry sector to implement the Total Quality Management System according to ISO 9001/2000 standard. It is striving to be a leading regional & international iron and steel company through optimal utilization of its human and material resources and adopting advanced and clean technologies.

### 5.2.2. The company's activities

LISCO is one of the largest companies in Libya with an annual design capacity of 1,324,000 tons/year of liquid steel. The company competing with international firms, in both developed and developing countries, by implementing the latest quality philosophies and techniques (Arshida and Agil, 2013).

Article No. (3) of the law of establishment of the company defined the objectives as follows:

1. Management and exploitation of the factories and the installations of the iron and steel complex.
2. Marketing of iron and steel products inside and outside the country.
3. Organisation of studies and research to develop and expand the productivity of the iron and steel complex, and the development of plans and programmes necessary for its application.
4. Training and development of the labour force are necessary for the functioning of the complex, in co-ordination with the relevant third parties.
5. Establishing and providing installations and services as necessary for the iron and steel complex.

The company has a compound of iron and steel consisting of eight major factories; Direct Reduction Plant, two Steel Melt Shop, Bar and Rod Mills, Light and Medium Section Mill, Hot Strip Mill, Cold Rolling Mill, and a Galvanizing Line and Coating Line. The number of employees in the company is about 7 500 employees with 65% of them working as technicians. The Figure 5-1 shows the Production of Iron and Steel at LISCO.

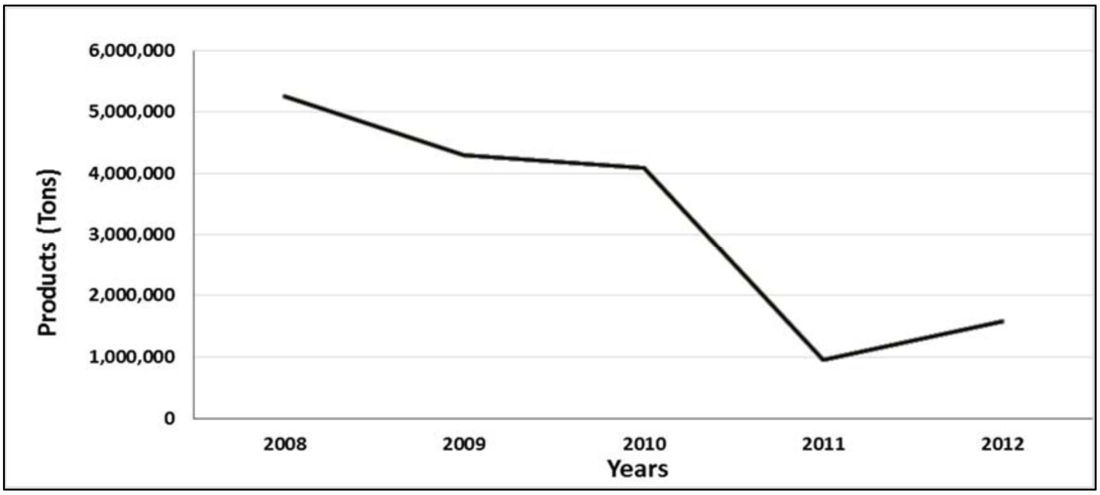


**Figure 5-1: The production of Iron and Steel from 2008 to 2012 (Tons)**

Source: The Management of production at LISCO (2014)

### 5.2.3. The company management and structure

The organisational structure is set out in Article (3) of the law of establishment of the company and it shall be prepared in agreement with the work requirements of the company in the technical, administrative, productive, and marketing areas. The administrative divisions - in the organisational structure- should depend on work size, specialty, the ability of supervision and following-up, and the self-internal control over all works and tasks that shall be carried out by different administrative divisions in the company. The specialty of each administrative division should be determined in a clear way to avoid misinterpretation of specialties, which may result in duplications in performing the work or leave some works without control.

The organisational structure could be adjusted if the interest of work necessitates. The observance of the above-mentioned controls. The organisational structure and any adjustment to it shall be approved by a decision issued by General Assembly under a suggestion from the Board of Directors.

#### 5.2.3.1. The company management


**Figure 5-2: The administration building of LISCO**

The company is managed by a Board of Directors consisting of five members, elected by the employees and the Government, with one member chosen by the Chairman (LISCO, 2014).

#### 5.2.3.2. Company structure

The organisation structure of LISCO is a traditional hierarchy (see Figure 5-3), with the Chairman in the senior position, followed by the Deputy Chairman, the Board Members and a number of offices. e.g. Office of the Board affairs, Office of Follow-up and Cooperation, Office of Legal Affairs, Tripoli Office, Consultation Office, Office of Quality Insurance and Auditing Management. Furthermore, the Chairman is also followed by four main sectors; Production Affairs, Technical Affairs, Administrative & Services Affairs and Financial & Commercial Affairs. The structure of the Administrative Affairs and Services sector will be described later in this chapter.

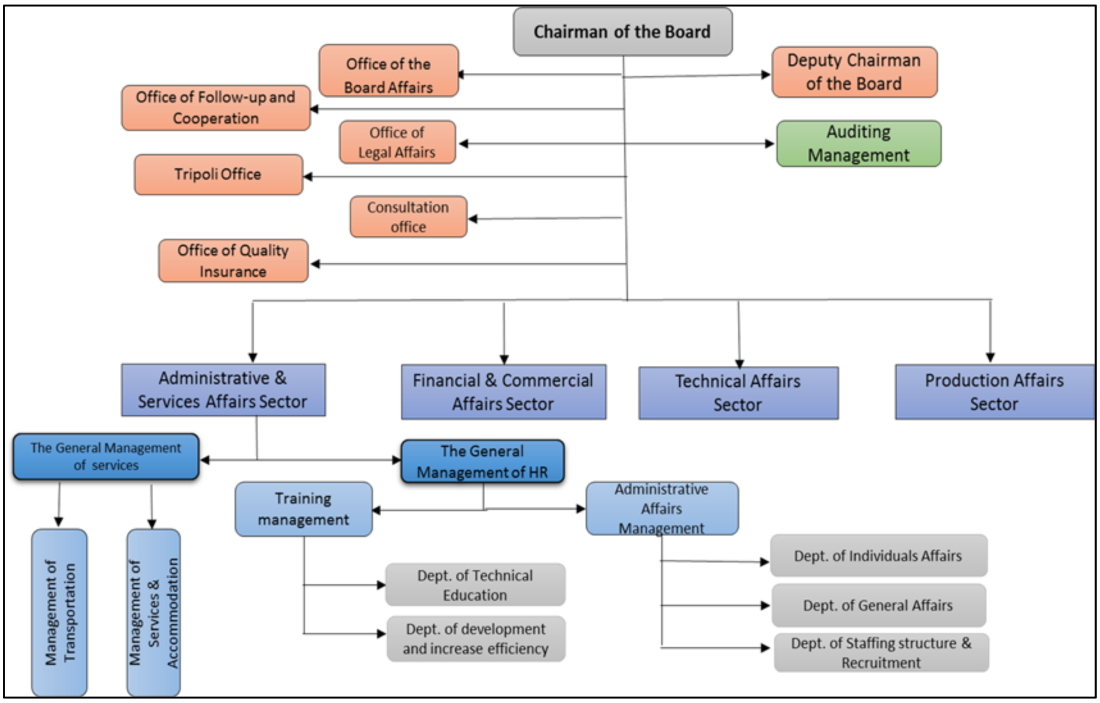


**Figure 5-3: The organisation structure (LISCO, 2014)**

### 5.2.4. Training Department

The training department is tasked to implement the policies and plans endorsed by senior management to develop and train staff and to achieve its task, assumes the following (LISCO, 2014):

1. Prepares a list of the requirements of the departments of the company.
2. Preparation of the general plan of training for each year, including identifying numbers of the candidate for training.
3. Supervise the work progress of the company's training centre.
4. Communication with national and international organisations, institutes, universities and research centres specializing in the field of iron and steel and training in order to take advantage of the expertise available in these institutions.
5. Provide the necessities for training centres from materials, equipment and human resources to run the training centre efficiently.
6. Determine the dates and places of training courses.

#### 5.2.4.1. Strategic training

Under the LISCO regulations (2014), article (2) was identified the training strategy as follows:

"*Human resources (HR) department shall set a strategic training plan for the company, which matches with the policies, objectives and general conditions of the company, and contributes to the promotion of the employees in coordination with the departments. This plan should be approved by the board of directors, and Training Dept. should set the programs necessary to execute it*".

This text emphasizes the importance of the link between the training objectives, and policies and objectives of the company.

#### 5.2.4.2. Training and development

Training activities at the company aim to raise the level of efficiency and effectiveness of human resources technically and administratively. This ensures awareness and identifies technological developments, work methods and systems applied in the iron and steel industry at the international level.

To achieve this goal, the adoption of the annual training plan included training programmes that meet the requirements in the various administrative and technical fields. The majority of the training programmes focus on the technical aspects that are directly related to production processes (Training Plan, 2014). On-the-job training is the primary method used in the development and training of staff through theoretical and practical seminars. Training policy states that from 10 to 15% of the workforce must be trained annually. The 2014 plan included (**165**) training course and (**1564**) number of people targeted for local and abroad training, this according to paragraph (3) and (4) from article (8) regarding the importance of identifying training needs.

Local training achieved about 70% of the target number for each year while the abroad training achieved 42% only from the target annually. This is reasonable when considering the circumstances of industrial activity in Libya as a result of instability. The company has seen the desire for continuous development. The following table shows the number of candidates trained during the period from 2008 to 2014.

**Table 5-1: Number of Trainees from 2008 to 2014**

| Place of training | Years / The plan | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|---|---|---|---|---|---|---|---|---|
| Local | Targeted | 3080 | 2881 | 3835 | - | 2895 | 1308 | 1405 |
| | Actual | 2884 | 2125 | 3246 | - | 1851 | 1031 | 1267 |
| Abroad | Targeted | 169 | 110 | 102 | - | 202 | 174 | 159 |
| | Actual | 57 | 51 | 102 | - | 40 | 72 | 64 |

Source: The training center (LISCO, 2014)

From Table 5.1 and Figure 5-4, it is clear that the company has a shortage in the number of trainees in 2011, which can be attributed to the uprising, and to a shortage of candidates because of the war of liberation.

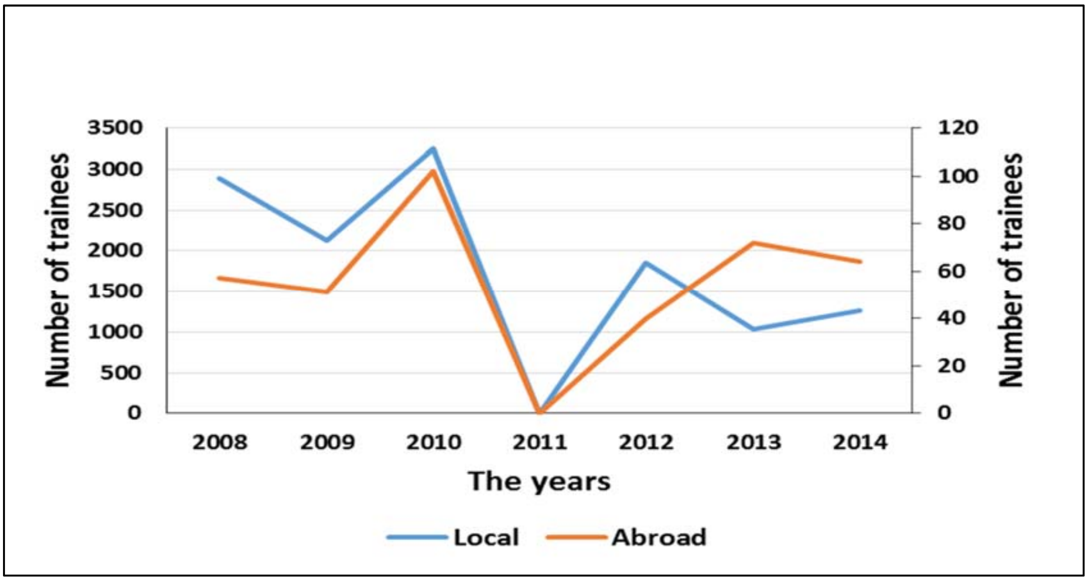


**Figure 5-4: Total Numbers of trainees both locally and abroad.**

### 5.2.5. Training objectives

According to Article (3) under the LISCO regulations (2014) from the regulation of training, training aims are:

1. Preparing, qualifying and promoting the competence of employees in order to meet the company's needs, keeping up with the technical and technological development of equipment, machineri, or producing new specifications, or changing the methods of work performance, or reviewing the applicable rules.
2. Qualifying the accepted students to cover company needs in terms of HR.

3. Preparing the new jobseeker to fill vacancies.
4. Adjusting the job behavior and improving the performance level to overcome the problems and difficulties the work may encounter.
5. Preparing a second- rank of supervisors and leaders.
6. Providing the trainees with knowledge, skills, and behavioral attitudes needed to perform the work efficiently and competently.
7. Reducing the need for supervision, control, and follow-up.
8. Limiting the accidents that may occur during work.
9. The ability for competing within the market.
10. Guaranteeing that the performance of the work is conducted efficiently, fast, and economically, as well as, bridging all gaps that may appear in the performance standards defined by the seniors officials in the company and the actual performance was achived by the employees.

#### 5.2.5.1. Practices of TNA

The training department writes to all other departments in the company requesting them to specify their training needs. The training administration invites different departments to furnish it with suggestions related to training courses they may need. The department of training provides training specialists for all departments so that they can help examine and identify employees' needs using reviews of reports, jobs, and employees, in line with the company's requirements. The training department receives the training needs from four sectors: Production, Technical Affairs, Administrative Affairs & Services and Financial & Commercial, each sector submit a detailed plan to be discussed with the supervisors in these sectors, then referring to the Board of Directors.

Under the LISCO regulations (2014), article (8) highlighted the importance of TNA and the significance of identifying training needs) as follows:

1. Linking the training process with the needs of the work.
2. The identifying inadequacy of performance that could be treated by training.
3. Determine the employees who are targeted for training.
4. Determine the training objectives, training programme content, and training method.
5. Activate the training process to achieve its goals.

6. The ability to objectively evaluate the training and its benefits.
7. Optimally use the budget allocated for training purposes.

Under the LISCO regulations (2014), article (9) shows the mechanism of identifying training needs and each department shall bear the responsibility of specifying the training needs in coordination and cooperation with the training department by observing the following:

1. Analyse the job requirements and compare the scientific degree of the employee, his major skills required for his job, his ability to carry out tasks and duties in achieving the objectives of the work competently and efficiently, and to what extent he needs more qualification to fill his training gap, to provide him with knowledge and skills, correct his job behaviour necessary for work.
2. Analyse the problems and difficulties the work encounters, the reasons behind not achieving the objectives linking that to jobs and their occupants to determine who needs training and what type of training to offer.
3. Specify the main and specialized training courses for each job to enlist the targeted trainees.
4. Specify the training needs to the second rank of leaders and supervisors intended to be replacements.
5. Link the training to the actual needs of the work.
6. Make use of evaluation of employees' performance in specifying the training needs

Training needs should be formulated in the form of objectives, and referred to the training department no later than 31 August each year according to the training needs form.

Article (10) under the LISCO regulations (2014) shows how management training needs are identified:

1. To what extent the departments abide by the policies and objectives of the company, in agreement with the budget allocated to the training.
2. Observance of the departments by conditions stated in articles 4, 5 and 9 of these regulations, when identifying training needs.
3. The plan is to prioritise the training programmes that should be considered according to its significance and to the work requirements in the company.

4. The period to execute the training programme shall be specified according to work requirements.

#### 5.2.5.2. Performance appraisal

Under the LISCO regulations (2014), the article (38) were mentioned: "*All employees shall be subject to the annual performance evaluation, which depends on the annual efficiency reports; these are prepared to describe the status of each employee in all aspects relevant to his carrying out his job and the level of his performance throughout the period the report covers. The company Chairman must approve the annual efficiency report*".

- The grand total of the efficiency report is 100 marks with distribution as follows:-

*(Excellence 100-86, Very good 85-71, Good 70-56, Pass 55-41, Weak 40-less)*

- The rates of job performance could be set by a decision issued by the Board of Directors, according to the type and nature of each job, to serve as a guideline for evaluating employees' performance and for encouraging incentives.

Also, Article (39) under the LISCO regulations (2014) identified the procedures of setting efficiency reports as follows:

The annual report on each employee shall be put on the form specially prepared for such purpose by the director, then submitted to the senior manager to be approved or amended, in the latter case reasons should be shown. In the event of disagreement in opinions between the director and senior the form should be referred to the post directly higher than the senior boss to approve the opinion. If the employee is in scholarship for training or study or enlisted for military services for no less than 6 months the report should be prepared by the competent body the employee worked for during the time of his scholarship or service that is according to Article 44 of these regulations. If no report has been received during this period, the last annual report will be accepted as well as the last report on the employee will be accepted if his performance is not evaluated if he is on an unpaid vacation for more than 6 months.

However, the Article (40) under the LISCO regulations (2014) showed mechanisms of preparing efficiency reports as follows:

1. The forms of annual efficiency reports for all employees shall be prepared by Administrative Affairs Department before the end of the year, including all main data on each employee extracted from his personal file, and referred to the concerned organisation division.
2. The annual efficiency reports shall be prepared and approved by the competent body stated in the previous article within not more than one month from the date of receiving them, and returned to Administrative Affairs Department.
3. Administrative Affairs shall complete the data of the efficiency reports. If there is any deficit it shall follow up the efficiency reports related to the employee on scholarship or secondment from or to the company, or in the military services.

#### 5.2.5.3. Planning of training

According to Article (11) when setting the training plan, under the LISCO regulations (2014) the following basics should be observed:

1. Policies and objectives of the company.
2. Make use of the evaluation results of the previous training programmes in the preparation of the plan.
3. Focus on the training and development programmes that could be put in effect locally by using the company's possibilities onsite or in the Training Centre.
4. Training objectives should be clear, accurate and specified.
5. Places and areas of training should be specified.
6. Jobs and trainees should be specified for each programme.
7. Budget necessary to conduct the training plan should be allocated.

The plan preparation is identified in Article (12) under the LISCO regulations (2014). By observing provisions of articles 10 and 11, the training department shall set the project of an annual training plan, the proposed budget, including the training and academic courses, symposiums and conferences within Libya or abroad, and regular study in the centre. The Board of Directors should approve the project each September, and the plan is implemented from 1st January until 31 December.

## 5.3. Case study B: National Cement Company (NCC)

### 5.3.1. An overview of the company

The NCC was formed as a state-owned company in 1988, resulting from a merger between two companies (the National Cement & Building Materials and the Souk El Khamis General Cement & Building Materials).

The administrative headquarters of the company is in the city of Alkhumes, which is approximately 100 kilometres from Tripoli, and has a central geographical position, and is owned by the Libyan Government. It is one of the largest companies in Libya, and one of the largest producers of cement in North Africa.

### 5.3.2. Company's activities

The company comprises four cement factories located in Margeb city (100 kilometres west of Tripoli), in Souq Alkames city, in Libda city, and in Zeleten city (approximately 103 miles from Tripoli). Those factories are designed for a production capacity of 3,300,000 tonnes per annum to produce cement according to Libyan specifications, and produced for internal consumption, and used for many construction purposes, particularly building houses, bridges, roads and ports. Figure 5-5 shows the production of cement at NCC from 2010 to 2014.

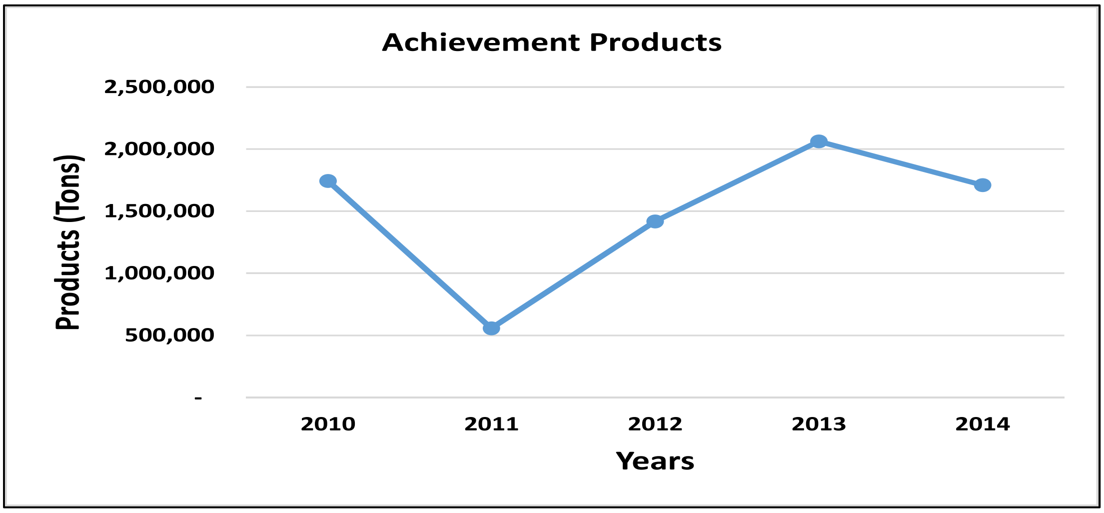


**Figure 5-5: Cement production from 2010 to 2014 (Tons)**

Source: The Management of production & Tech. at NCC (2014)

### 5.3.3. The company management and structure

#### 5.3.3.1. The company management

**Figure 5-6: The administration building (NCC, 2009).**

The NCC has a centralised management system to control of all its factories and plants.

#### 5.3.3.2. The Company Structure

The management structure of NCC, (see Figure 5-7 )

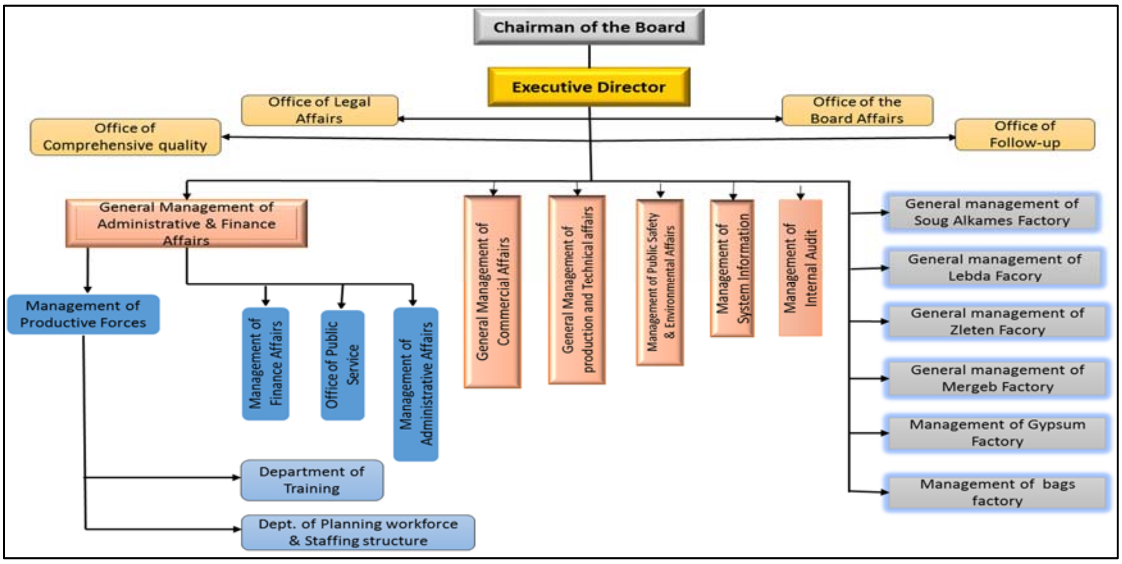


**Figure 5-7: The organisation structure (NCC, 2009)**

The management structure of NCC is similar to other organisations. This structure started with the Chairman of the Board and Executive Director, then four offices and seven general managements and five management posts. General management included groups of managers and departments. It could be said that six factories (four of cement, one of the bags and one of gypsum) are separate units from the main departments in the main administrative headquarters. The department of training is a part of the Management of Productive Workforce, and according to the organisational structure of the factories, there are departments of individual and training affairs. Hence, the training activities are split between the department of training in the company and those departments in each factory with no clear responsibility.

### 5.3.4. Company's employees

NCC employs around 2500 employees, and 70% of them are technicians.

**Table 5-1: The number of employees from 2011 to 2014**

| **Year** / **Workforces** | | **2011** | **2012** | **2013** | **2014** |
|---|---|---|---|---|---|
| Technical | Engineer | 285 | 284 | 288 | 282 |
| | professional | 1374 | 1374 | 1314 | 1296 |
| Non-technical | Administrative | 254 | 253 | 297 | 289 |
| | Financial | 131 | 130 | 137 | 132 |
| | Ordinary | 559 | 558 | 551 | 541 |
| Total | | **2603** | **2599** | **2587** | **2540** |

Source: The Management in NCC (2014)

### 5.3.5. Training department

Among the training management tasks, is the preparation of the general training plan, including the numbers eligible for training each year, and also to determine the aspects covered by the training, propose training programmes and the cost data for allocations of the annual training budget of the company, which will be approved thereafter by senior management.

The workforce is made aware of training by bulletins and publications being issued by the Training Department, and providing facilities to help them with knowledge of modern technological developments in the operation, maintenance and production field. In order to achieve these tasks, the Training Department has developed a set of objectives, including:

1. Drawing training policies and plans for the workforce at the company at all levels.
2. Determine the required skill levels for all professions and jobs within the company and on the basis of the job description.
3. Develop training and systems procedures and methods relating to raising the efficiency of the company workforce.
4. Selecting the training courses through nominations by the relevant departments of the company.
5. Preparation of the annual sessions of a programme to raise the efficiency of the targeted employees, which include the identification of the trainees, skills, knowledge and abilities required.
6. To communicate with local and international academics to take advantage of their experience and expertise, and follow the latest research and developments in the field of raising the efficiency of workers to achieve technical education, and increase productivity.

#### 5.3.5.1. Strategic training

Before the end of the fiscal year, specifically in October, the General Administration issues letters to all of its factories urging them to specify their training needs; each factory writes to its own administration to determine the training requirements of its employees, according to their specialties. It is specified according to the needs of each employee to develop his capabilities in his line of production and also, to make any adjustments that may be required arising from the job description, new employees joining or advanced technologies in modern practices being adopted by the company. The company undertakes training plans and programmes, setting the priorities for implementation, of these programmes to executable training projects.

The annual plan dedicated to training and development within NCC is set under Article (93) under the NCC regulations (2009), the factories and committee of training designated for such purpose. The plan should begin on 1$^{th}$ January, and end on 31$^{st}$ December of each year, and should be approved by the Board of Directors no later than June of the previous year.

#### 5.3.5.2. Training and development

**Table 5-2: Number of Trainees from 2008 to 2014**

| Place of Training | Years / Numbers | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|---|---|---|---|---|---|---|---|---|
| Local | Targeted | 789 | 744 | 516 | - | - | 391 | 482 |
| | Actual | 755 | 673 | 471 | - | - | 313 | 398 |
| Abroad | Targeted | 177 | 217 | 104 | - | - | - | 72 |
| | Actual | 71 | 105 | 63 | - | - | - | 16 |

Source: The training committee in NCC (2014)

From Table 5.3 it is apparent that the company has a shortage as can be seen by the number of trainees from 2011and 2012 onwards due to the war of liberation and the survival of many of the employees far on corporate headquarters and their factories.

### 5.3.6. The Training programmes in the company

#### 5.3.6.1. The practices of TNA

The training plan is prepared according to the correspondence from the factories. The company will then contact the specialized centres and institutes to review their training plan, select the programmes that the factories need including the course/programme title, its field and term, then send to senior administration for approval, and then distribute to all the factories in order to nominate their trainees according to numbers required for each training programme.

#### 5.3.6.2. The performance appraisal

In article (30) under the NCC regulations (2009), at Chapter five, the performance reports are identified as follows:

"*Employees of the company shall be subject to the system of periodical annual performance reports which is prepared by the direct boss on a special form, attached herein, including description of the employee' status in all aspects related to his performance, abilities and behavior during the given year, to be approved by the competent body. All the approved performance reports, in their final form, should be submitted before the last month of the year*".

While article (32) under the NCC regulations (2009), highlighted who will prepare the performance appraisal:

"*Employee's report shall be prepared by his direct boss and approved by the senior boss. If the employee is on scholarship, secondment or in his military service for not less than (6) month, the report prepared by the supervising body, or his last annual report, shall be accepted*".

According to the performance appraisal form the key elements of efficiency degree are general points (65%), while the functions were divided into three kinds e.g. leading and supervising jobs (35%), professional, scientific and technical jobs (35%) and operational and vocational jobs (35%).

#### 5.3.6.3. Planning of training

According to article (93) under the NCC regulations (2009), titled "Annual Plan of Training and Development":

*"The authorised Training & Development Department in the company shall set an annual plan dedicated to training and development, in cooperation with the other departments in the company, factories and committees designated for such purpose. The plan should begin on 1st January, ends on 31st December each year, and should be approved by the board of directors within not more than June of the previous year of the training plan"*.

Under the NCC regulations (2009), article (94) was mentioned the elements of the plan that should be taken into account:

1. Focus on the training and development programmes that could be carried out inside or outside the company, in cooperation with training institutes and institutions or by means of experience exchange between companies operating in the same area. The company can recourse to training abroad.
2. The objectives of the training and development should be precisely clarified for each trainee as to point out the intended purpose, whether to promote the accuracy and performance level, or to increase production, or to introduce trainees to a newly adopted systems meant to prepare him for a new job, or else.
3. Specification of the period of training.
4. The topics and places of training (locally or abroad).
5. Specification of the number of training nominees.
6. The budget of the training plan.

7. A complete evaluation of the plan for the concluded year, to make use of it in the preparation for the next plan.

## 5.4. Summary

This chapter has provided a descriptive analysis of the organisational context of LISCO and NCC. This analysis shows that the selected companies are large organisations of the public industrial sector. It is also demonstrated that the companies failed to achieve training targets during 2011 onwards due of the war of liberation as a result of the uprising in February 2011. Legislative texts exist for nomination procedures for training courses, although the implementation is poor. The relevant training departments do not have the terms of reference appropriate to do their job effectively.

Chapter 6 will provide an insight into the qualitative data that was obtained as part of this study and will provide an analysis of the semi-structured interviews that were conducted.

# Chapter 6. Qualitative Data Analysis

## 6.1. Introduction

The main aim of this chapter is to present and analyse the data collected from the case study organisations; LISCIO and NCC. Data analysis of interviews as a supportive source to the findings that came from the questionnaires. There is no standardised approach to the analysis of qualitative data (Saunders, *et al.,* 2003).

Interviews were conducted with participants using 17 questions related to the issues addressed in the literature review.

Qualitative data were collected through using semi-structured interviews, with managers in the select company. The semi-structured interviews were used as the first phase of the research in order to study the current situation, barriers, and motivations to implementing TNA in the LICs.

The thematic analysis is used to analyse the interview since it is considered an appropriate technique for this research and has been used in qualitative research (e.g., Abdulrahim, 2011; Elfazani, 2011; Atoki, 2013). As there is not a significantly large body of research on TNA in Libya, it is difficult to start to build a framework directly for these issues without obtaining an overview of the situation. Thematic analysis was used in three steps for analyse interview notes: (a) The researcher identified the emerging themes by coding the transcript data for each question, (b) analysis of answers and explained interpretive differences of each, (c) selected themes were evaluated using internal homogeneity, the extent to which the data in each category hold together in a meaningful way (for example, see Appendix 2)

A more detailed discussion of the points arising out of the questionnaires and interviews will be provided in Chapter 8.

This chapter presents data findings arranged according to every part in the interview and according to data reported from seventeen participants within which themes are reported in *italic.*

## 6.2. Company's background and the participants

### 6.2.1. Company information

Participants were selected from two large companies in Libya, nine from LISCO and eight from NCC. All participants provided a good description of their company, with all acknowledging that both companies are considered two of the largest in Libya and enjoying a good reputation. It was further acknowledged that LISCO is specialised in the production of iron profiles, iron sheets and bars to the local market and to some extent foreign markets. On the other hand, NCC was described to produce cement, plaster, bags, and limestone to local and foreign markets to some extent. Both companies have *high employment rate*, with LISCO employing approximately 6700 employees while NCC employs 3000. NCC employed mainly local labour, with some foreigners (e.g. Pakistanis, Indian, and Polish). Both companies seem to employ highly technical employees and are attractive to many.

### 6.2.2. Participants' job specification:

All participants have management roles in their HR departments. However two of the participants explained their main job is training related; others had more general roles not exclusively related to training. However all participants are in touch with the administrative part of the company, especially employment and personnel matters (e.g. administrative affairs department manager, personnel affairs manager, planning and production control manager, work facilitator etc.). Participants' *level of experience* in their jobs vary, seven participants have experience of less than five years in their jobs and five participants had ten or more years of experience. Participants' involvement in training varied; two of the participants explained that they are not involved in T&D processes, and the remainder are involved in training either as members of committees, the preparation process and design, with two stating that they have a limited role despite their involvement.

## 6.3. Libyan Iron and Steel Company (LISCO)

### 6.3.1. Body responsible for training

To further investigate the HR development in LISCO participants were asked to state the body responsible for HR development and training within the company; it was evident that the participants in the company are unsure as to what is the main body responsible, commonly the majority (six participants) thought it mainly the responsibility of a number of departments (e.g. training department, productive force department, personnel affairs department) which commonly are under the HR umbrella. Three participants stated that the *senior management* is the people responsible for HR development; however there appears to be confusion and overall participants did not state the exact body responsible for training. It was argued by three participants that there is a *need for one management* to conduct all issues related to training such as planning, policy, designing and conducting training e.g. one stated: *"many parties are involved in training, however I think this should be the job conducted by one department only"*.

### 6.3.2. Role of HRD in the company

It is commonly agreed between the majority (seven) of participants that the main purpose of the HRD is to maintain and increase employees *efficiency* and *knowledge* level, it was quoted by a participant that the HRD *"..aims to develop employees, including their knowledge, skills, and behaviour to ensure improvement in their job performance."*

Thus, it can be observed that the general theme that all agree upon is that HRD is responsible for mainly *developing the skills of the employees* which ultimately increases their knowledge and leads to better work efficiency. The quote above covers the main answers provided regarding HR development, which all links the development of employees.

Four of the participants were critical despite the role of HRD, and stated that the department *does not live up to its tasks* and that despite its proposed role people in HRD need to make more effort:

*"…. the HRD people do need training themselves at the time, the main task they do is recruitment, despite the fact that we all know that it should also focus on the development of personnel. Its role needs to be enhanced, and it should have more responsibility in the company".*

### 6.3.3. Setting training

All participants from LISCO explained that the major reason for setting up training for technicians in the company is based on the need for such training. Determining such needs is the job of the training department; it is explained that generally the training department suggests potential training plans that are offered in annual reports or special committees. A participant suggested that the training plans are conducted*"According to the annual suggestions by the various executive departments".*

A more specific reason for setting training is done especially when *advanced technologies* are implemented; it was quoted that:

*"The training needs are decided according to any changes or adjustments that may arise in terms of the job description, or upon new employees joining the existing workforce, or advanced technologies and modern practices introduced into the company".*

Although participants did not provide great details about setting training it was clearly observed that such training is provided based on the need for them only. However, participants failed to be more specific in explaining the needs (i.e. what are the typical needs that determine training), which suggests that they were not fully aware of the many reasons of why training should occur.

### 6.3.4. Role of HRM in formulating training plans and policies

When asked about the role of HR departments in training, participants explained varying answers. However, the common theme across all participants is that the HRM is the *main party* responsible for *planning/proposing the training* for employees, and preparing such plans for *approval*:

*"Suggesting training policies and setting executive plans upon their approval. Basically, HRM follows the progress of training from A to Z".*

Following their approval, HRM also plays a significant role in the *implementation* of such training, such as researching and placement of employees as well as performance assessment. This could be summed up in a quote provided by an experienced participant who stated that HR management:

*"Plays a significant role in the selection and placement of nominees, the collection of annual reports and performance assessment, follow-up of attendance levels of employees by means of a computerised system, promotions, and leave, in addition to establishing communication between departmental managers in the company and other bodies".*

Two participants were nonspecific and stated that it is responsible for setting up the type of *skills* needing developing, setting up a *budget* and *improving current skills*. It was observed through the participants answers that the role of HR management is *large and crucial* but again they provided generic answers suggesting that their knowledge is somehow brief about HR department role as they also suggested that senior managements are the main body of decisions concerning training plans.

### 6.3.5. Training plans preparation

According to five participants, the way the training plan is prepared appears to rely upon the basic *need* for the plan (as explained earlier). It is important that the training plan improves the current skills of employees and there is a need for it especially when *adopting new technologies*:

*"The training plans are set according to the needs of the technical and other departments when replacing or adopting new automation that requires training, it is important that new technologies are well maintained and trained upon; this will ensure better maintenance, productivity".*

Another process, as agreed by all participants, that is crucial in training preparation is *surveying* or *feedback*, however, based on the need there is a procedure that is commonly followed by departments and management, the *need determines the plan* which is then discussed in committees before *approval*:

*"Training plan is prepared according to the feedback provided by the factories, including a list of the training needs to be addressed. Then, the company*

*undertakes to contact the pertinent specialised centres and institutes to review their training plan, select the programmes that the factories need, including the course/programme's title, its fields and terms. At the end, it is sent to the senior management for approval".*

From here it can be understood that the common procedure for preparing training can be summed up by researching needs, setting a plan and discussing it followed by approval.

### 6.3.6. Effect of factors on setting training plan

Participants were asked about factors that might have an effect on training. One of the main factors were shown to have an effect on setting up a training plan is the *issue of time*. Although some participants stated that the training planning is not affected by external factors, five participants explained that there are *delays* within departments in delivering and conducting the training:

"*The plan may be affected by a higher body or department, which can delay the all-important process of decision making needed for the application of the plan".*

There were other factors that were also explained to be issues or factors affecting training. Three of the participants referred to issues such as *lack of funds:*

"*It can be affected in terms of lack of funds and absence of an adequate place to implement this programme*".

Three participants also stated that there is the issue of *location;* it is explained that whether it is inside or outside the company the location is essential:

"*Location and where the training takes place is not well thought of, it needs to be a priority*".

Two other participants stated that there are *poor quality training and trainers*; to them this is the main problem:

"*Training should be useful, but I must admit some training lacks quality needed, we either do not need it or it is poorly executed by trainers*".

### 6.3.7. The stages of implementing the training plan

The stages of training implementation seemed to be clearly known to all participants. It is essentially known that the first step of the implementation is *specifying the need* for training followed by the *proposal,* which is then directed to the *management* for approval and budget allocation and finally the *implementation*. Also, it was explained that after *approval* the person/department responsible will seek *offers* from training companies and *agree on time*, however, it was also explained that there is a process of *selection of nominees* (only about 10-15%):

*"Senior management sets the percentage of employees who should receive training, mostly accounting for approximately 10% out of the total workforce. The process also involves collecting a list of needs as specified by each department, preparing the plan, proposing the programme, gaining approval, notifying the relevant training providers (number of training courses, trainees, etc.), initiating the training plan, and preparing periodical reports to be handed to senior managers".*

Also, there seems to be an understanding that after the implementation there is a *process of appraising* the training programme, however, this was not commonly reported between participants except the two most experienced. The same two participants were also critical that although the process and stages are well known they are *poorly executed:*

*"Knowing the stages is not the problem, they all know that but following such stages to the full and ensuring that they go smoothly is never 100% they do not even reach a 50% quality".*

### 6.3.8. Methods and techniques used to training needs assessment

In line with LISCO, five participants stated the process of specifying the training needs is mainly decided by the *line managers or supervisors* and explained that they are the people best equipped to decide who needs training, which suggests that the next process is deciding the *candidates* by the same people. Two participants explained that at times, training is actually suggested by *senior managers* and then assessed for suitability by line managers:

*"Supervisors are the best people to suggest the needs and propose them to senior managers, but at times the opposite happens. But all depends on what the employees are in need of and what improves their skills".*

Three participants provided generic answers: specifying the training needs is decided in *committees* only, and then line managers have no say in that:

*"Simply the training needs are decided in committees that take place few times a year, they discuss them and decide there and then".*

Critically, one participant stated that at times that the same training needs are done on an annual basis regardless of their need, and some simple training is internally done without much studying of its usefulness, such as basic computer skills: *"Sometimes training takes place by default, whether there is a need or no need".*

When asked whether or not they follow a specific TNA technique, all participants stated there was *no adherence to any technique:*

*"I do not know whether we actually follow any technique, all I know is that we base training on productivity and efficiency if training is needed we conduct it. So specifying the needs is decided based on supervisors who make judgements and proposals and the final decisions are made by the senior management committees".*

Two participants explained that they are *aware of the three levels* analysis but stated that it is hard to implement it in their company, as it requires skills that they do not have:

*"I know based on my theoretical knowledge that there is the three levels analysis, but it is not used here and I never thought it will be used in the current environment".*

Furthermore, one participant highlighted that there are no compliant techniques with company policy, and this might lead to *random techniques or traditional techniques* being used:

*"Certainly we do not follow any technique if we did it has to be written in the training policy. But maybe that explains the confusions often faced when deciding on the training needs".*

### 6.3.9. Involvement of top administration and senior managers in planning

The contribution of senior management in identifying the needs and setting up the training plan appeared to be *crucial*. All participants agreed that senior management do have a contribution in *reviewing* and *approving* the training plan:

*"The senior managers discuss the plan to ascertain that it does respond to the needs of the company and in line with the general policy. Line managers review the training plan in accordance with their priorities and to their proposals in the general plan to be actioned"*.

It was also suggested that they are the ones that set up the training policies:

*"Setting up the broad policies and training programmes and approving the training plan"*.

Despite their crucial role, one participant who had more than fifteen years of experience explained that their role is crucial in all of the above but stressed that this rarely happens in the company, which suggests that senior management could be an obstacle when setting up training programmes:

*"This should be done (involvement) by offering or listening to suggestions and taking recommendations on board, which hardly happens"*.

### 6.3.10. Distinguishing between technical, professional, and behavioural skills

Participants were asked whether or not the company distinguishes between technical, professional and behavioural skills when doing training, in answering so it was agreed by four participants that the company *does distinguish* based on the needs:

*"It does so for the purpose of setting the training programmes, in order to meet the employees' needs and the type of skills required"*.

However two participants stated that the company attempts to deliver training *programmes that combine all aspects of skills:*

*"The company knows what it wants, and what skills are useful so it combines all needs together at times to maximise benefit"*.

Two participants stated that although the company distinguishes between skills, at times the company delivers the same training courses or similar ones that had been conducted before; therefore there ought to be more effort on targeting only that training that improves skills:

*"The company needs to focus on what improves the skills, no need to repeat courses, which happens at times to little use".*

### 6.3.11. Training and performance appraisal

Overwhelmingly it was agreed by all participants that *training is linked to employee performance* level i.e. training leads to better performance. It is commonly agreed that this is generally determined by taking part in the training through *assessment* and *evaluation*:

*"By assessing the training outcomes which the line manager and the trainee yield after the period of follow-up and evaluation".*

Also the link between training and performance can be *obvious* in the annual reports of supervisors according to four participants:

*"By follow-up reports prepared by the line supervisors, as well as the annual reports, these are meant to reflect who training has led to better performance or the usefulness of such training".*

One participant stated that based on his experience that although there is usually a link between training and performance some of the training programmes are *not noticed* for their benefits especially the non-technical training:

*"Not all training are useful, some of which is actually useless and is a waste of money and time, it is hard to see the benefit of some non-technical training".*

### 6.3.12. Employees' participation in identifying training needs

Employees' participation in the planning or specification of the training need is evident by four of the participants who said that they are involved compared to five who said that there is no involvement of employees. Employees' main involvement comes in the form of *suggestions*:

*"By being interviewed to identify the weaknesses that may hinder their development in terms of performance, and by specifying their interests and dislikes, and by developing the working methods and environment".*

Additionally, it can be agreed that the involvement of employees is somehow *limited* to the initial stages of discussions, they do not play an important role in specifying the needs which most often decided based on supervisors and managers.

**6.3.13. Evaluation of the training plan**

In LISCO training evaluation, appeared to be *irregular* (four participants), *inefficient* (three participants) and *ineffective* (two participants). A participant stated that the training evaluation:

*"Still irregular, eclectic and random, at times we have an evaluation and many other times we do not do so".*

Among the participants, two stated that there is *no evaluation*, hence, it was suggested that the current plans need to be reviewed:

*"Evaluation literally does not exist, although we know we should do so. There is a need to have the policy to focus on evaluations and review training".*

Three participants went on to explain the training plan cycle before explaining the evaluation, they explained that it begins with an *identification of training needs* then, following this step, the *designing of the training.* Step three is *implementation*, and finally, an evaluation is undertaken, which involves *reviewing* all other steps and ensuring that training needs have met all objectives.

**6.3.14. Methods adopted and best methods to identify training needs**

The training evaluation plans that do happen come over *periodically* in the form of *questionnaires* (five participants) and *interviews* (three participants) and performance reports by supervisors (three participants):

*"This can be done through questionnaires and periodical reports on the plan, prepared by the Training Department on a weekly, monthly, quarterly, and annual basis".*

However, interestingly, it was highlighted that such methods lack the critical approach, i.e. no criticisms and *critical appraisal* is provided in order to improve further, as noted by two participants: *"Ordinary routine methods, perhaps without much of a critical approach"*.

It was noticed that the evaluation is *outdated or old;* two participants explained that the evaluation methods are quite old and not up to standards, they have explained that there is a need for online evaluation too:

*"I would say that the traditional ways of evaluation be it questionnaires or interviews are old, we need to start using online questionnaires and online feedback that should be open to all employees"*.

One participant described that at times supervisors evaluate training in a positive way and clarify the reason why they had asked for it:

*"Evaluation can be misleading especially if the supervisor was one of the promoters for training"*.

*Questionnaires* were considered the best method of identifying training needs (five) followed by *interviews* (three). Two other participants stated that *group discussions,* between management and employees, are best although not frequently used.

### 6.3.15. Methods' efficiency used to identifying training needs

As explained earlier, most participants in LISCO stated that the methods of evaluation *are not efficient* (five participants) whereas two participants stated that they are *good methods* but *not executed well:*

*"No problems with the methods efficiency, however, the people responsible for evaluating training are not efficient themselves at times"*.

Two participants stated that the methods used are *very efficient* and that they are *satisfied* with them:

*"They are very efficient, they help in monitoring progress after training, I am satisfied with them"*.

### 6.3.16. Difficulties in identifying training needs

By looking at answers provided by participants regarding the difficulties in assessing training needs it was obvious that the common theme is *a lack of experience* among managers (trainers) as explained by six participants. It was highlighted that trainers do not have enough experience:

"*Lack of experience amid the managers as well as the employees to identify the training courses*"

Three participants highlighted a further difficulty that employees themselves *lack the awareness* of how important training is to perform in their jobs:

*"Some employees are not willing to participate, in addition to the limited number of training programmes".*

It was explained that some employees do not wish to leave their families for an offsite training course and are *not serious about training* (two participants). Hence, management should pay attention to increasing employees' awareness of and improve their participation:

*"Employees at times do not care about training, and that is a major difficulty, especially if it is far from the workplace".*

### 6.3.17. Suggestions to improve methods of training needs analysis

Finally, participants were asked to put forward some suggestions to improve the methods used for specifying needs. In doing so it was highlighted that there is a need for a *separate training department*, improving the *evaluation* of training courses, *educating employees* about the importance of training, using more *scientific approaches* in training, and offering *suitable courses*. Importantly it was highlighted that those responsible for training need *to be educated* and trained on what is the best way to determine the training needs, specifically there was a reference to using scientific methods of *training needs analysis*.

## 6.4. National Cement Company (NCC)

### 6.4.1. Body responsible for training

Participants from NCC stated that the main body responsible of HR development and training is the *Board of Directors* (six participants). Two of the participants explained that this responsibility falls on the *productive force department*. Participants in this company were *sure* about the body responsible for training. They further explained this is a *team decision* that could involve all departments in the company. Two participants highlighted that *poor qualification* is an issue in the company concerning training e.g. one participant stated:

*"The staff in HRM department were not well qualified to manage training and developing, and they need the training to do their jobs".*

### 6.4.2. Role of HRD in the company

Participants stated that the role of HRD is *vast* and extensive (seven participants), and explained that this involves the responsibility of recruiting employees and maintaining their *development* and *wellbeing* throughout their employability:

*"In our company most of the HRD is the main department that keeps in touch and develops employees skills, hence I think it is the most important department.. its responsibility varies greatly, it takes a new employee from basic skills and enhances them with advanced skills if and when required.. it is the main contact point when it comes to our development and our wellbeing in the company".*

Three of the participants further stressed that the HRD has a responsibility of *enhancing productivity using all means:*

*"HRD is mainly concerned with improving the productivity, as simple as that. It is required to do whatever it has to, including training, to ensure that our skills lead to productivity which ultimately leads to company success".*

It was highlighted that despite its responsibility, HR department is *not fully efficient*, two participants explained that despite a significant role in the company it is limited in its decisions to take the necessary actions due to *bureaucracy* within the company:

*"Theoretically we know the HR department role in the company and what it does but, unfortunately, many times I notice that despite the efforts HRD makes such efforts fall to deaf ears, which means they do not have much said in developing employees".*

### 6.4.3. Setting training

Similarly to LISCO, eight participants in NCC shared the opinion that the *need* for training is the main cause behind setting up training courses for employees. Five participants stated the company constantly demands *improvement* in all sectors. Training improves employees' skills and *productivity*; therefore, it is essential that training is mainly based on the needs that improve overall productivity:

*"The company decides whether or not to pursue training based on the need, if there is a need there is training. Certainly the company does not do training for the sake of it; there is generally a reason of it, be it improvement of productivity or catching up with developing technologies".*

Two participants raised an issue that the company does *training regardless of the need*, they stated that some of the training is needless and does not improve anything in the company:

*"Although training is needed many of the courses are needless but they are conducted anyway, so to say training is done based on need does not tell the full story. Some courses are pointless and involve no preparation or rationale behind it".*

### 6.4.4. Role of HRM in formulating training plans and policies

The HR department and its role in NCC were discussed by all participant, who agreed that this department is the main body that *suggests training related issues*. They also agreed that it is involved in the process of *designing* and *delivering* skills to employees who required it:

*"Being an employee in HR department I know its responsibility and role in training. Anything related to the development of personnel, their development falls on the HR department, which means that this department starts from surveying the needs for training all the way to deliver and assessing employees thereafter".*

Six participants stated that this department plays a *crucial role* in the company's development and productivity of employees. It was explained that this department is considered the *backbone* of the company:

*"HR department is essential in any company, whether it is small or big, and when talking about training, it is the responsibility of this department to make suggestions and take decisions".*

Four participants furthered stressed that despite its role and importance, it is often those higher up (directors) who take the decisions, explaining that its role is often *underestimated:*

*"Unfortunately, we all know its role, and its importance but the fact is, this department only works as a proposing department that is often ignored by senior decisions that might suggest training and skills that are not necessarily demanded by the HR department, hence this department needs to receive better recognition".*

### 6.4.5. Training plans preparation

Echoing LISCO, all participants stated that the beginning of preparation for training starts from the *need,* and suggested that it is supervisors in the company who are the first people who might specify or suggest such needs. The company must be convinced that such training is *crucial to the productivity and the development* of personnel. Following which comes a *survey*, to provide a reason for this training. Again it is the job of managers and supervisors to follow the need by investigating and *collecting information* that supports the need for such training:

*"The basic rule in training is to see whether it is needed or not, this might be suggested by a manager or a supervisor who might think certain individuals should be trained, or that certain machinery will work better if training was provided. Following that it is the job of supervisors to survey and investigate if such training is needed".*

Three participants stated that the training department *prepares a plan* and puts it forward to decision makers. But they stated that the plan normally should be inclusive of all aspects of the type of training, to the duration and costs:

*"The HR department needs to show a full plan, based on evidence for the need, this plan should be conclusive and then put forward to senior management".*

After the approval of the plan, HR takes responsibility for everything. *Delivering* is the last part of training according to five participants:

*"Deciding the courses or training and approval of so is generally followed by the implementation and delivering of training and that also falls within the responsibility of the HR department".*

Two of the senior participants were critical again, in that although they know the role of HR in training, such role is *poorly undertaken* and sometimes training is decided based on poor survey and based on poor knowledge. Accordingly, the HR department should be more professional:

*"The roles are knowing, but I am not sure if it reaches the desired standards, there needs to be professionalism when taking training decisions".*

### 6.4.6. Effect of factors on setting training plan

In NCC, a number of similar factors were reported to have an impact on training. Four participants explained that some employees do *not accept* the training for different reasons and that some of the training are too demanding, poor and too simplistic that some trainees do not wish to take part in it:

*"Employees at times are too powerful to reject some training courses, they think they are useless, hence, this might be the main factor".*

Three participants stated that the acceptance of senior individuals is also a factor, and some programmes are rejected due to *lack of senior support:*

*"Training sometimes is rejected by seniors, as they are not in touch with what the employees need, hence, there is a lack of support".*

Three participants considered the *timing of training* to be an obstacle as it is hard to agree a time to suit employees and trainers:

*"Time is always an issue, trainers sometimes are fully booked at the times we want them, and in other times employees can't go for a family commitment, especially if training is out of company location".*

Furthermore, two participants considered "*Wasta*" to be an issue, *Wasta* translated to *nepotism* in English:

*"There is the influence of factors such as social life kinship and friendship, as well as nepotism, these factors influence the training process when attending or choosing training".*

Also, two participants stated that *rewards and incentives* for training can impact its success, i.e. by offering incentives trainees are more likely to gain knowledge and participate in the training and develop their skills:

*"Trainees need to feel that they are gaining a reward from training, whether it is a promotion or financial, this was shown to work".*

### 6.4.7. Stages of implementing the training plan:

Similar to LISCO, all participants showed a general understanding of the stages of training implementation, stating that the first stage is *studying the needs* of training, to determine why they are needed, followed by *selecting the trainees*, which five participants saw as one of the main early stages in deciding the training:

*"Usually, we decide what is missing or needed using various methods, then we try to select the candidates that will benefit from this training".*

All participants stated that there should be a *carefully designed plan* for delivering training from beginning to end. Four participants mentioned that any course decided or planned for needs to be *approved* by the management team or Board of Directors:

*"Planning is another stage that we consider important, there is a need to provide a design that will appeal to the senior managers as they are the ones who will give us the green light thereafter, only if the designed plan is good enough"*

*"No training is conducted without the approval of senior managers, hence, it needs to be approved before it is implemented".*

Deciding the *location* is another stage of training implementation, with all participants stating it is important to decide the location of the training, and it was highlighted that this is an important decision based on which many employees will or will not choose to participate due to personal reasons:

*"The location of training is sometimes problematic, I personally would rather not attend training outside the city or abroad; especially if it is longer than two days, I can not leave my family for longer".*

As a main stage of training, *agreeing fees* with trainers or the training company is important, and essential when deciding whether the course is affordable or not to the company (two participants), and it is important to get quotes from different companies:

*"Also, it is our job that we calculate the cost of training per candidate and how much it will cost the company, this can be done by getting quotes from different trainers/companies".*

The final stage reported is *delivering* the training; before this, all previous stages must have been met (four participants):

*"Delivering the training, i.e. through lectures or seminars or workshops, in or outside the company is the last stage".*

Two participants mentioned that *assessment* is a stage that is taken following the training, and it is important to ensure that the training was successful and employees benefited from it:

*"The company needs to see if the candidates have actually benefited from the training and the way they viewed the training. That requires us to assess their views and workout the value of the training after".*

From NCC, two participants were critical of the *professionalism* in which such stages go through and claimed that despite knowing the right procedure there are often problems following them to the full. They referred to the *quality of trainers*, saying that some trainers are not qualified enough to meet the specified needs:

*"It is true that most might know the stages, but there is a problem for us deciding on qualified trainers and getting the suitable training, maybe we need to be more professional in deciding what is best for training even if the stages take longer in time".*

### 6.4.8. Ways and techniques used to training needs assessment

Specifying the training needs is done annually following team meetings and annual reports and assessments, however, it can be concluded that most participants (six) agree that the specification of training depends on whether it is needed or not in the company (as highlighted earlier). Identifying training needs are done according to the training courses the company is used to. A participant stated that the process is specified first based on the need proposed by the line manager then directed to the factory manager (CCN) and then it is forwarded to HR. It was also stated that specifying the training needs depends on recruiting new employees, and managers have to nominate employees for such training:

*"The process of determining the training needs is carried out by the line manager, according to an application presented by the Productive Workforce Department, in which trainees are nominated and the required training stated".*

Most participants seemed to have relevant experience in setting up and analysing training needs, five participants reported three or more years of experience. This suggests that they should be aware of the process of specifying the needs, however that was not evident in their answers where little details were mentioned about the process of specifying training needs.

Furthermore, participants were asked to specify which scientific analysis technique they use in the company to conduct training assessment. Most of the participants stated that the company does not adhere to any analysis technique:

*"Identify training needs in the company is still suffering from the failure to follow any scientific method of analysis techniques, because of a lack of experience for those who are identifying the training needs and prepare a training plan. Also, most of the department managers are not interested in determining the training needs of their subordinates".*

Further questioning showed that the company does look mainly at the operational level of analysis; individual and organisational levels were not reported:

*"It is safe to assume that the company is only interested in the operational side of training, mainly managers' reports about skills and productivity of individuals".*

### 6.4.9. Involvement of top administration and senior managers in planning

Similarly to LISCO, seven participants from NCC stated that senior managers are the main people *deciding* whether or not to go ahead with any training, and highlighted that as supervisors they follow whatever is written in *policies*, *rules* and *regulations* that are set out by the senior managers. In short, it appears that senior managers are seen as *decision makers (*five participants*)*:

*"Top management or officials are there to take decisions, they authorise all plans to train individuals. It is their responsibility to set up the policies and regulation in relation to training".*

When asked about their role in training, they stated that senior managers *hardly review the plans* to train in great detail (three participants), although that is their responsibility:

*"In all honesty, it is disappointing to say that senior officials hardly look at training needs in great detail, they are often more of an obstacle due to their lack of involvement. Although at times they might suggest training, and never follow it through".*

### 6.4.10. Distinguishing between technical, professional, and behavioral skills

In NCC, all participants stated the company *categorises skills and distinguishes* between them, further explaining that regardless of type the company targets all categories and conducts training in each:

*"Yes there is a difference in the types of training we conduct in the company, some are behavioural and some are IT related and some of it management related etc.. and the company surely prioritises the ones that increase productivity, but at times, training happens in all categories".*

Three participants mentioned that there is *no distinguishing* between technical, professional and behavioural skills, and there is no attempt to do so:

"*No there is nothing like that, the company orders training based on demand, if there is a need there is training regardless of the type. We are not professional enough to distinguish and study the needs in such detail*".

Two participants stated that the company *does not focus on soft skills* to enable improvement in behavioural skills, and blame *management's lack of experience*:

*"Lack of experience and training for responsiblility of identifying training needs to meet the needs of the company and employees, especially when soft skills are considered".*

**6.4.11. Training and performance appraisal**

Five participants explained that *there is a relationship* between the training and the performance thereafter, and highlighted this as the reason training is conducted in the first place, intending to improve quality and productivity:

*"That is the whole point, performance and productivity after training, if training is deemed useless it will not be conducted, so there is a relationship there".*

Three participants stated that the performance level is judged by *supervisors' assessments* in the company, with them being the people to judge performance in relation to training:

*"Performance is best judged by managers and supervisors who have direct contact with employees and who can judge productivity of employees who attended training".*

Four participants commented upon the *poor link* between training and performance, explaining that some candidates do not benefit from the training and hence that cannot be seen in their performance:

*"I would say that the link between performance and training is actually poor, I see that for myself. Some employees do not take on board the training skills they acquired, they find it hard to adapt new skills or they just not willing to improve, unfortunately".*

One participant explained that performance is best *improved* when there are *technical skills* when new technology is acquired and when providing training on them, the performance can be noticed:

*"Participants who work manually and are taught manual technical skills are best placed to have better performance following training".*

In terms of *candidacy for training*, there is no link with performance appraisal. Three participants explained that due to lack of job description, annual appraisal does not lead to training or qualify employees for training:

*"It is problematic to determine whether performance appraisal is linked to training candidacy, for that you need to have job descriptions that are lacking in the company"*.

### 6.4.12. Employees' participation in identifying training needs

It was highlighted that employees' participation in planning the training is *not significant*. All participants stated that the role is minor and is only at the start of the planning that they might play such small role through *feedback* to the supervisors and the line managers:

*"Employees have a minor role to play in the planning of training. This is mainly by asking for the training or highlighting certain problems to their supervisors"*.

Three participants stated that employees have absolutely *no role* in planning the training and they are just merely candidates for the courses that are decided for them:

*"No they do not have a role, they are just candidates and everything is decided for them, they are asked to attend training and that's all"*.

One participant highlighted how crucial the role of the employees is in the *planning* and explained that some employees are very knowledgeable and know what they really need and such employees need to be involved:

*"Employees are the first line of productivity and their say should be respected and given weight in the designing of training, some are very knowledgeable and can have great input. At the end, they need to be comfortable with training and their involvement is logical"*.

### 6.4.13. Evaluation of the training plan

Six participants stated that evaluation does happen however they explained that it is not up to standard, three stated that it is *poor* and two other participants explained that it is *irregular:*

*"Training evaluation does take place at times, especially after important training, but does not happen often in all honesty".*

Two participants explained that there is a *lack of interest* in evaluation of training and the company does not appear to do much about it, which means evaluation is useless:

*"Investigating whether or not training courses were satisfactory and the evaluation of them are important, but, unfortunately, there seems to be a lack of interest from seniors in the company, they think it is useless".*

Furthermore, it was acknowledged by two participants that the evaluation stage is poor because earlier stages of training plans (identification, design and implementation) are poor:

*"Evaluation is simply poor because earlier stages are poor, how do you expect it to be of a good standard".*

### 6.4.14. Methods adopted and best methods to identify training needs

When discussing the type of evaluation method, four participants stated the *questionnaire* is the main way. Trainees are given a *short questionnaire* to state their satisfaction with the training course. Three participants stated that *interviews* are conducted with the trainees, however, they explained that it is generally a short interview. One participant explained that he does evaluation through *observations*, where he looks at employees and their work and tries to notice improvement especially in technical jobs:

*"There are a number of ways to evaluate, the easiest way would be a short questionnaire, but at times I find it appropriate to have interviews or observations".*

Although evaluation are done *periodically*, it was stated that supervisors' or *managers' feedback* is another way for evaluation (two participants). However, one explained that there is a need for better evaluation:

*"We rely at the time on managers' feedback, although there needs to be better efforts there".*

As for the best methods used, all participants stated that *questionnaires* and *interviews* are best placed to show the need for training. While five participants stated that *management feedback* is the critical method, two stated the importance of *scientific methods* (3-levels) as the best way, although not used.

### 6.4.15. Efficiency of methods used to identify training need

Participants provided mixed opinions regarding the efficiency of the evaluation methods. Four participants stated that the methods are *effective,* whereas the other four stated that they are *not effective*.

However, further information was provided that all participants do not have a problem with efficiency but thought the consequences of such evaluation is generally *not useful* (six participants):

*"They are good methods and are effective, but they are useless if we cannot make use of them, and that's the case here".*

### 6.4.16. Difficulties in identifying training needs

Participants showed that the difficulties are mainly in their *relationship with the supervisors/managers;* three participants stated that there seems to be *negative attitude* towards training:

*"Employees at times do not like to participants in training, especially if they think it is difficult or not convenient".*

Three others stated that the main problem is with the *supervisors* or the managers who do not help employees appreciate training; they need to put more effort into *promoting training:*

*"Employees need to be encouraged to attend training and helped with specifying the training needs".*

Two participants stated that some training is *boring* and does not appeal to employees, therefore, they do not learn from it. Also, employees are *not involved* in choosing training courses, which therefore explains their attitude:

*"At times employees just attend courses that are pre-designed by others and that explains why they dislike attending them"*.

### 6.4.17. Suggestions to improve methods of TNA

It was explained overall that the company should place more importance on *employees' input* into training; they need to be *involved* in the process of training from beginning to end. It was further explained that the company should put more *money* into training to improve productivity and skills of all employees in a non-selective manner, and there is a need to *motivate* its entire staff to learn and attend training from senior management down so that everyone should train. A further suggestion was made that the entire *training policy* needs to be reviewed and improved. Others stated that the company should invest in more training to be *conducted in the company* and not from outside. The company needs preparation of a *long-term plan* enabling it to meet the training needs for a period, not less than three years by the companies specialising. It was stated that there is a need for the TNA model to clarify analysis three levels required. Also, according to participants, there is a need to *look at Western companies* and learn from their success.

## 6.5. The main findings from the interviews

The main findings generated from the interviews are as follows:

1. To set training in LISCO, it was clear this mainly depends on whether there is a need and specifically when the factory adopts new technologies. Whereas with NCC, the focus is on improvement was driven training and productivity, and training being set regardless of the need for it.
2. According to participants from LISCO, HRD plays a role in increasing efficiency among employees, improving knowledge and developing new skills to suit the needs. Similarly in NCC, participants quoted the role in maintaining development of employees and improving their wellbeing. Participants are active, with regard to training, as part of committees and in jobs related to the development of employees (LISCO). In NCC, participants are involved in aspects of development, part of committees and designing of training.
3. The HRM, according to participants from LISCO, play the main role in planning and proposing as well as implementing training, and the role is crucial. On the

other hand, NCC participants stated that the overall role is suggesting training related issues, and considered their role as crucial.

4. Training is often planned, according to participants in LISCO, by assessing the training needs at the start and when adopting new technologies, as well as based on surveys and feedback from management; this is often followed by a plan for training and finalised by approval from senior management. In NCC, the process was summarised based on need first, following by collection of information regarding the need, designing a plan and delivering training.
5. A number of factors seem to have a negative effect on training, with LISCO participants stating that time of training and delay are crucial issues; lack of funds also seemed an issue while the location of training is problematic to the employees. Lastly, it was stated that training is often poor and not up to the standards needed. NCC participants stated the employee's decision to not attend training is a major problem, with a lack of support from management, while the timing is also an issue. It was also narrated that aspects of incentives and rewards for training are not utilised enough.
6. Both companies explained that the stages of implementing the training plan start with specifying and studying the needs for training, followed by a proposal for training, approval from management and finally the delivery. In NCC, there were more stages, as they also included the process of selecting employees and selecting the location of training.
7. Participants were also asked about methods and analysis techniques used for TNA. In answering, LISCO participants mainly stated that training is conducted regardless of the need, but the main way of specifying the needs are through line managers, factory managers, although there is no adherence to any scientific method that allows specification of training needs but reference was made to the operational level. As for NCC, TNA is conducted through management and supervisors, while candidates also have input, training can be decided through committees and senior management. Again, there is no adherence to any scientific technique of TNA.
8. In both companies, administration and senior management appear to play a crucial role in training. LISCO participants stated that the main roles are reviewing and approving training, whereas in NCC it is decisions about training, deciding policies and regulations although it was mentioned that they hardly

review the training plans. Both companies appeared to distinguish between technical professional and behavioural skills, although courses are often designed to combine all aspects.

9. Employees in both companies seem to play a role when it comes to training, in the forms of suggestions and feedback but their role seems to be limited. Both companies are considered large and it was found that they both have a separate budget for training, along with mixed views about its sufficiency for training needs purposes.
10. Training in LISCO is traditional, and similarly in NCC, traditional methods involve lectures and seminars and practical sessions. Training is often offered in LISCO when new equipment is installed, when there are new recruits and when there seems to be a gap in employees' knowledge. In relation to NCC, they focus on the same but also stated that peer performance among employees is a reason for training.
11. Indices of performance are conducted annually or periodically but some participants stated that indices do not exist in LISCO, whereas in NCC the indexes are mainly the line managers and the supervisors, although poorly performed. The evaluation of training is judged in LISCO as irregular and ineffective and in NCC it is considered poor and irregular.
12. Participants seem to agree in both companies that methods such as interviews and questionnaires are used to identify training needs while management feedback is equally important. They are judged by both companies to be poorly performed although they could be best in identifying the need for training. LISCO stated that group discussion is the best method while NCC participants suggested management observations were. In LISCO such methods seem to be efficient enough to specify the training needs while there were mixed opinions about their sufficiency in NCC.
13. In terms of challenges and difficulties, when it comes to training LISCO reported that the lack of experience among the managers and the trainers in the company are the major challenges followed by the lack of awareness about the importance of training to the development of the employees. Also, employees seem to lack seriousness about why they need to attend training. In NCC, the relationship between management and employees appeared to be an obstacle

leading to employees having negative attitudes about training and its need, as some consider training to be boring and worthless.

14. Finally, participants in LISCO were asked how to improve training and TNA process, they stated there is a need to have a separate training centre specialised in this field while improving the evaluation of training. Employees and trainers, as well as managers, should improve their knowledge about TNA while there is a need to select suitable courses for employees. In NCC, participants stressed the importance of involving employees in decisions in training, and improving the budget for training and enhancing employees' motivation to participate in training. It was also recommended that the company should adopt a scientific method of TNA (e.g. the 3-levels).

Overall, these participants, from two of the biggest companies in Libya, are responsible for hundreds of employees, hence it is important to take their conclusions into consideration and provide solutions to improve training methods, planning and delivering. The two companies set high standards yet there seems to be a huge gap in participants' knowledge and a need to improve training capabilities.

It should be noted here that the answers of most participants of the selected companies were matched except some of them. The below Table 6-1 shows the differences in their answers as following;

**Table 6-1**: shows the differences in participants answers

| **No.** | **Themes** | **Companies** | |
|---|---|---|---|
| | | **LISCO** | **NCC** |
| 1 | Nomination for training. | Whether there is a need for training. | Regardless of the need for it. |
| 2 | Budget for training. | Fairly sufficient. | Quite sufficient. |
| 3 | Methods efficiency. | Considered effective. | Not so good. |

Hence, the next chapter will discuss findings from the questionnaire and the interviews in order to critically discuss the research findings in relation to the main research questions.

# Chapter 7. Quantitative Data Analysis

## 7.1. Introduction

The main aim of the study is to investigate the current practice of TNA in non-oil LICs, therefore, this statistical analysis concentrated on the industrial sector rather than each individual company.

This study adopted a quantitative method (questionnaire) to gain information from three types of the participants (technicians, line managers and who is responsible for training), supported by the qualitative method such as semi-structured interviews conducted with managers in order to generate rich descriptions and to obtain additional comments and observations from these categories.

Data collected by questionnaire was analysed through descriptive statistics that focused on frequencies and percentages using SPSS Computer Software. Descriptive statistics are a way of organising and summarising data and may take different forms, such as graphs, tables or charts.

These descriptive statistics were adequate for the purposes of allowing the researcher to present succinctly the reactions of a number of people to a limited set of questions and draw broad and generalizable conclusions, followed by a comparison of opinions, answers and scores based on common information (i.e. similar variables). Further, the impact of several independent variables (e.g. demographic details) on participants' scores will be analysed.

## 7.2. Descriptive analysis

### 7.2.1. Technicians

#### 7.2.1.1. Gender, age and marital status

A total of 332 technicians participated in this study; the demographics of the technicians show the whole sample was of male gender (100%), with various ages – the most dominant age group being 36-45 years old (51%), followed by 46-55 years old group (26%) and 26-35 years old (21%), with five respondents (1.5%) being aged between 56-65 years and one (2%) being below 25 years. The data showed the great majority of respondents are married (86%) and the remainder (14%) considered themselves single.

#### 7.2.1.2. Education and specialisation

In terms of education, participants were given eleven options ranging from primary school education to Ph.D. level; they were also given the option of providing an alternative/other education levels. Frequency statistics showed that the most obtained level of education was a high diploma (43%) followed by a university degree (25%) and mster (14%). For the remainder, the majority had lower education level than a diploma and very few had a higher level of education than a university degree.

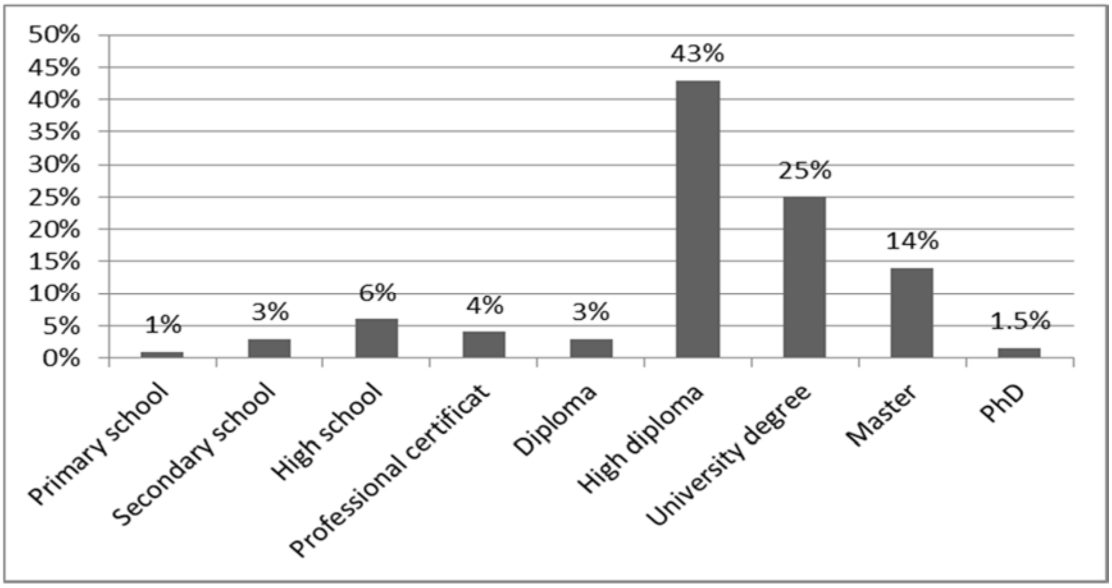


**Figure 7-1: Participant's qualifications**

Respondents *specialty* also varied, they were given four options: science, engineering, technical or other specialization. The frequency results showed the highest percentage reflected that participants had other specializations than the ones provided (35%), followed by (31%) specializing in engineering and technical subjects (24%). Only (9%) showed science specialization, and 3 participants (1%) showed multiple specializations.

Respondents also provided the place they gained their education from and, as expected, the overwhelming majority (92%) obtained their education from a Libyan institute, and very few from other parts of the world; of the remainder, (3%) were educated in Canada and (2%) educated in the UK. The remaining respondents were educated either in other Arab countries, the USA or other countries.

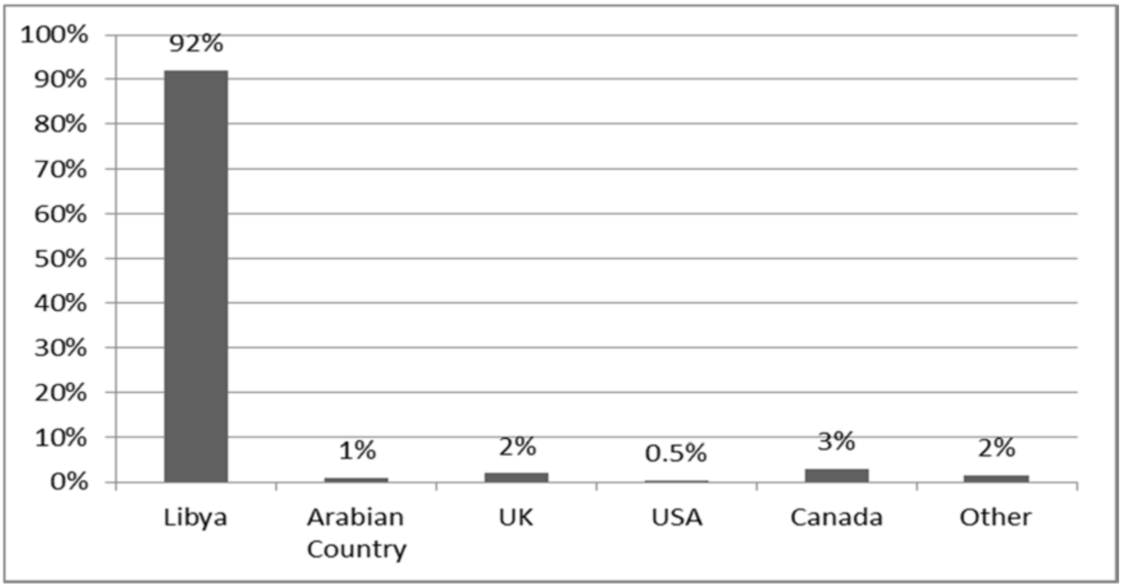


**Figure 7-2: Location of qualifications obtained by particiapnts.**

#### 7.2.1.3. Company and job details

This section concerns the experience respondents have within the company they work for and their job type, with findings revealing that the majority have worked for the company for more than 10 years (83%), followed by respondents who worked for 4-6 years (6%), 7-10 years (6%), 1-3 years (4.5%) and only one person having worked for less than one year.

There are varying job titles, however, it appears that the highest frequency was reordered for those who belong to the technical supervisory category (36%) followed by respondents who had other job titles within the company (29%), others with a mechanical technician title (14%), electrical technician (9%), two (0.6%) hydraulic technicians, and others (2%) with multiple job titles.

Experience within their current job was also required; the majority (72%) had an experience of more than 7 years, followed by an experience of 4-6 years (11%), 1-3 years (9%) and finally an experience of less than one year (8%).

#### 7.2.1.4. Training in company

Employees were asked to provide details of training they receive at their company and questioned on whether or not the company has its own training centre.

In response, the majority (92%) stated that their company has a training centre whereas others (9%) stated no such centre existed. Similarly, the majority stated they had received training from their company (93%) compared to (7%) who had not.

### 7.2.1.5. Methods of nomination

It appears that several *methods* are used to *nominate* employees for training; the most common is that the nomination is decided by “head of department” (61%) and the second most popular appeared to be the nomination by “the director of administration” (17%); “line supervisor” (10.5%); “training department” (5%); “by reward” (1%) and finally “performance report” (1%). However, (6%) did not provide an answer.

### 7.2.1.6. Methods determining training needs

When indicating the type of assessment followed by attending the training programme, employees stated that the most common method was “discussion” (28%) i.e. superiors will have a general discussion with them about the training that they might need. Others stated “questionnaire” (21%) and “interviews” (15%), and 39% stated other methods of assessment.

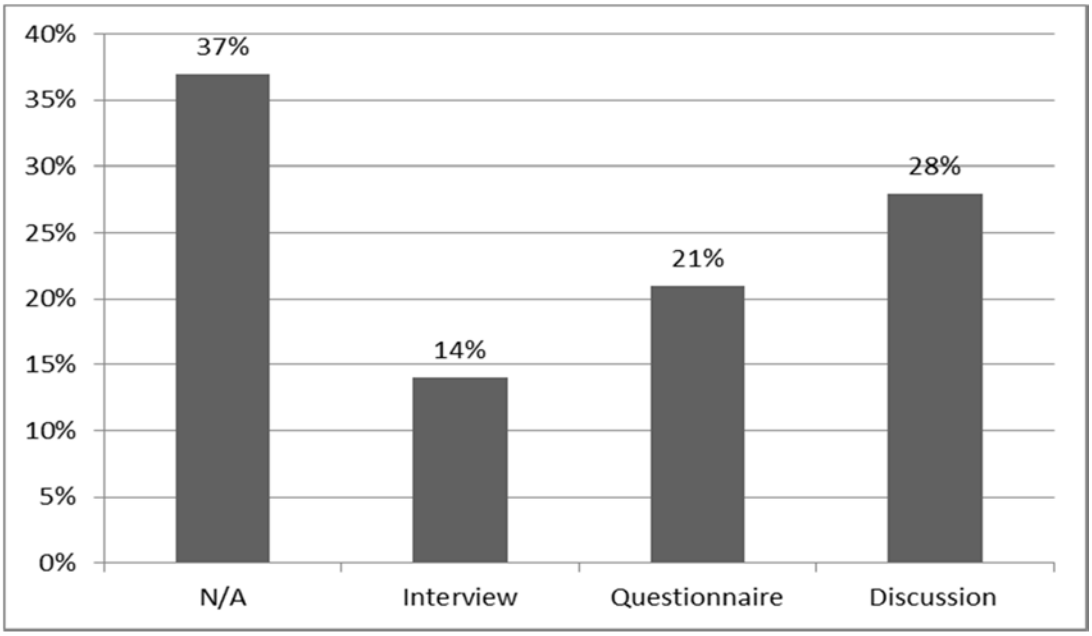


**Figure 7-3: Types of methods used on participants by percentage**

#### 7.2.1.7. Characteristics of training

Employees were asked to state the characteristics of the training they have attended in the company. Training is most likely to take place inside company (77%), and often is a short term training course (70.5%); include mostly specific content (68%), almost equally such training targets same specialty skills (47%) and general mixed skills (47%), and it is often conducted with mixed people (60.5%).

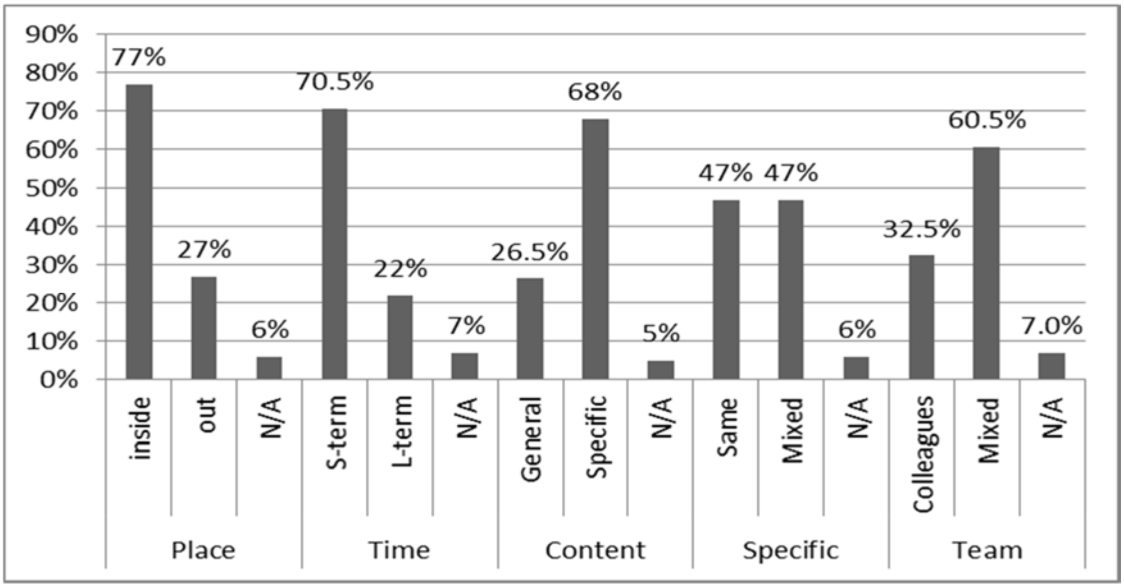


**Figure 7-4: Characteristics of training**

#### 7.2.1.8. Opinion about attended training

Most participants find the training they receive to be good (44%) or very good (26.5%). Further, the majority stated they have learnt from training to some extent (67%) or to a great extent (14.5%). In relation to their line jobs, the training was to some extent useful (41%) or useful (37%) and finally, the objectives of the training are often met to some extent (55%) or met to a little extent (21%).

#### 7.2.1.9. Determining training needs and the methods used

According to the participants' answers, it appears that the **performance appraisal** is mostly conducted on an annual basis (90%) compared to a three months basis (5%) or a monthly basis (1%). 3% of participants stated no answer. Furthermore, participants were asked whether or not they were **recommended training** in their last performance appraisal; in answering it appeared that the majority of them did not know (55%) whether such recommendation took place in the last appraisal, however of the remainder, (29.5%) stated that training was not recommended compared to (9%) who explained that the last performance appraisal recommended training to them. Other participants showed no answers (6%). Participants were further asked whether or not they were allowed to **propose** the area they need training in, leading to the majority explaining that they were allowed to propose (79%) compared to (19%) who stated that they could not propose such training.

The most appropriate method for identifying the training needs, according to the participants, was through having a discussion with the supervisor (31%) followed by questionnaires (23.5%); interviews (14%) and group interview with supervisor (14%). 14% stated, no answer while (4%) stated other methods.

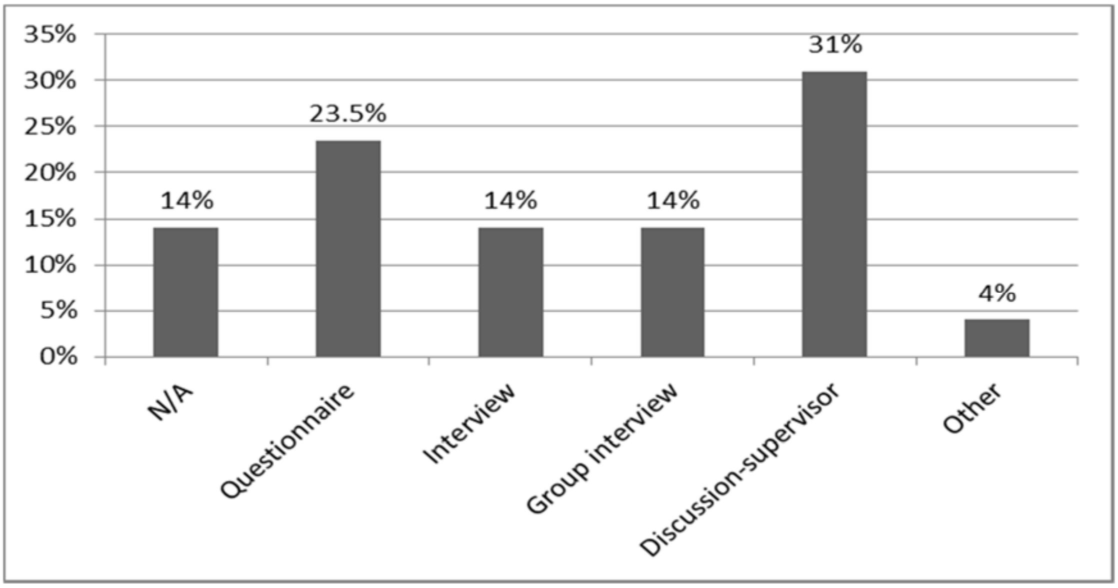


**Figure 7-5: proportion of participants in each method for indentifying the training needs**

### 7.2.1.10.Job description

Participants were asked whether or not they have a job description that explains their duties and responsibilities; most of the participants (75%) affirmed existence, whereas others (23%) explained the absence of a written job description, however others did not provide an answer at all (2%). Participants were then asked to state whether this job description is reflective of their actual role; just over half (50%) stated that it is reflective compared to others (24%) who stated it is not related to what they perform in their jobs, and a high percentage of participants chose not to provide an answer (23%).

The job description typically outlines the necessary skills, training and education needed to current employee or potential, and it's spelled out duties and responsibilities of the job. The job description can serve a basis for interviewing candidates for training.

#### 7.2.1.11.Reasons for training

To determine what motivates participants to seek training, they were provided with four advantages of training then asked to state what motivates them most. It was found that participants mostly attend training "*To acquire new knowledge and skills for promotion*" (64%); followed by the motivation "*To enhance the performance of my current job*" (38%). Other motivations such as "*To get to know new people in the course*" (1.5%); "To get a certificate" (3%) were much less popular. Some participants stated other motives (1%) while others did not provide answers at all (3%).

#### 7.2.1.12.Identification of training needs

The majority of participants think it 'very important' to identify the training needs (75%), while others (23%) stated it is only 'important'. On the other hand, only one person explained that the identification of the training needs is unimportant, whereas (1%) of the participants chose not to answer the question.

#### 7.2.1.13.Satisfaction with the training programmes

Satisfaction with the training programmes varied among participants; those who were 'only satisfied' (40%) showed higher percentage to those who were 'dissatisfied' (31%), but (14%) had 'neutral satisfaction' about the training programmes while (9%) explained that they were 'very satisfied' and (5%) explained that they 'very dissatisfied'. On balance and overall, there seems to be a slightly higher percentage of satisfaction compared to dissatisfaction.

The weakness of satisfaction on training programs confirms that training did not provide with using quality standards for the candidate of training.

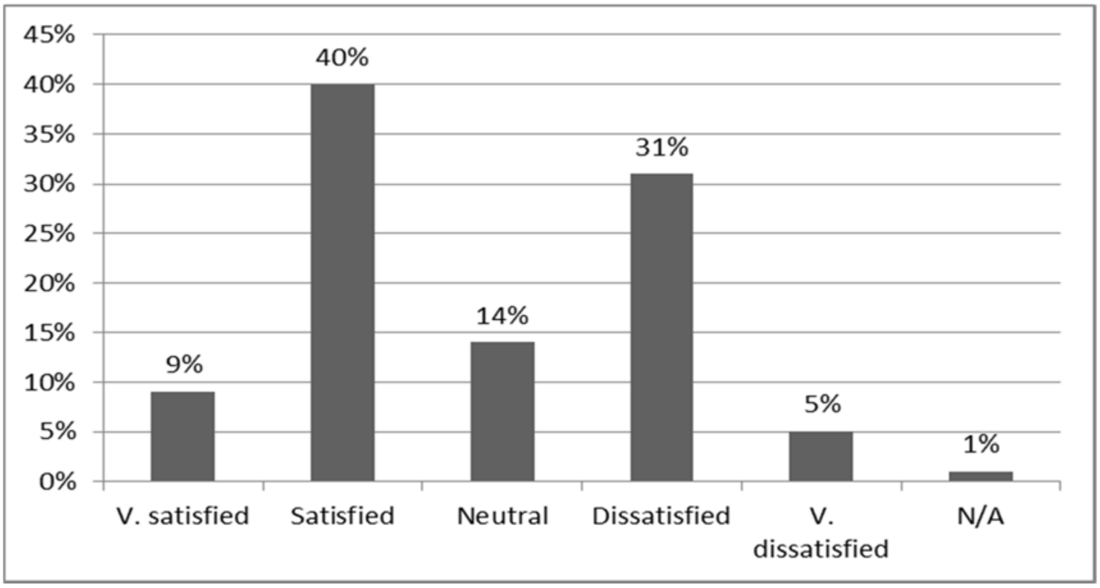


**Figure 7-6: Satisfaction of participants with training programs**

### 7.2.1.14.Impact of training on company

By looking at the data outcomes, it was obvious that participants mostly agree that the training has impact on the company in terms of Productivity and Efficiency (72%); followed by a distance with an impact on “increasing job satisfaction” (20%); “increasing profit” (4%); “decreasing absenteeism rate” (3%) and finally an impact of training on “decreasing staff turnover rate” (2%). Some participants explained that there are other types of impact of training on the company (3%), while others indicated no answer (3%).

### 7.2.2. Line managers

### 7.2.2.1. Gender, age and marital status

A total of 111 participants (line Supervisors) took part in this study. Similarly to the first section (technicians) the whole sample within this section were male (100%), of varying age between 26- 65 years old. It was found that the majority of the respondents are between 36-45 years old (46%), followed by those between 46 and 55 years old (37%), and those between 26 -35 years old (13%). Only five respondents (4.5%) had an age between 56-65 years old and no respondent was below 25 years old. When looking at marital status it appeared that the great majority (91%) were married compared to those who are single (7%).

#### 7.2.2.2. Education, Specialisation and place of education

This part is concerned with the level of *education* and the specialisations the respondents have. The Figure 7-7 showed the highest percentage was found for those who had a university first degree (48%), followed by participants who have the higher diploma (31%), diploma (13.5%), and only (3%) had a Master's degree. Others had a professional certificate or lower education.

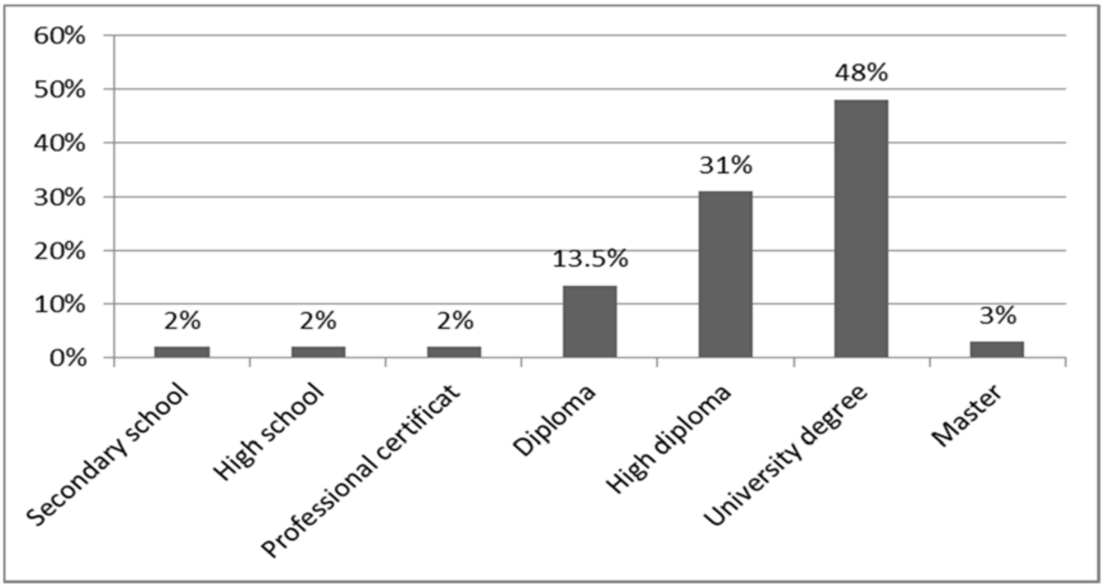


**Figure 7-7: Qualitifcation Level of participants**

As for the areas of specialisation, the majority of the respondents were found to have a specialty in engineering (68%). Of the remainder, the 'other' specialty had the highest frequency (9%) followed by science (8%) and technical specialty (6%). Other participants had arts (4%), management (2%) accounting (2%) or a specialty in law (1%).

Most participants (81%) were educated in Libya to gain their specialty. However of the other countries, the UK was a place of education for nine respondents (8%) followed by the USA (4.5%), Canada (3%), and other countries (3%). Only one person was educated in other Arab countries.

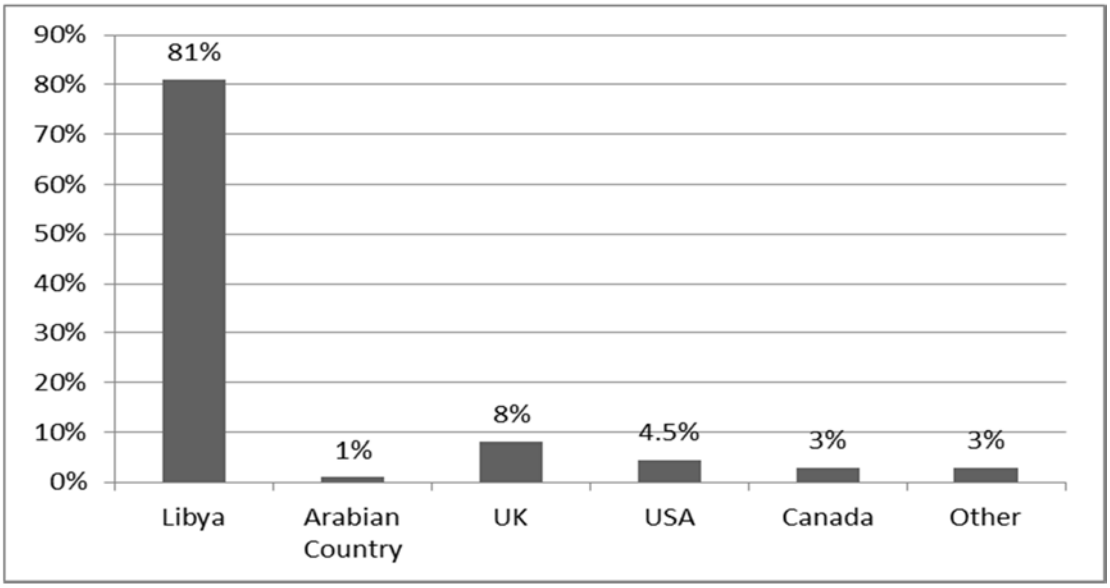


**Figure 7-8: Location of Qulaification obtained by participants**

### 7.2.2.3. Job grade, title and experience

In contrast to section A, participants were asked to specify their job grade; the highest frequency (62%) was generated for respondents who had a junior management grade, followed by respondents of middle management grade (37%) and only one person had senior management grade (1%).

Further, the participants were asked to provide their job title. The results showed that the highest percentage was for those who occupy general manager position (57%), followed by those who are supervisors (28%). No participant worked in the Training Department, or in senior management, but 13.5% explained that they have other job titles. Participants were also asked to state the length of service within the company; it was shown that the majority of them have worked for the company for more than 10 years (89%) compared to those who have worked for 4-6 years (6%) and 7-10 years (4.5%). Nobody showed an experience below 3 years.

### 7.2.2.4. Training in company

Participants were asked whether or not the company they work for has its own training centre, and the majority stated that the company does have a training centre (87%) with the remainder stating no training centre (13%).

The participants were asked to state if they specify the needs of the subordinates before nominating them for training courses, and the results showed that the majority do look at the needs of the subordinates prior to training (62%). However, a high percentage (36%) do not carry out such task before nomination for training.

Those who stated that they specify the needs of the subordinates before training were asked to state what *method* they follow in their assessment of the needs, and were permitted to tick multiple methods if required. The most followed method appeared to be the “discussion with direct subordinates about their training needs” as stated by (26%). The next most common method appeared to be the “analysis of functional tasks” (11%) and the providing of “lists of training needs” (10%). While a small number of respondents stated the “analysis of technical needs” as a method (8%), and “conduct interviews with candidates” (5%). Other methods were followed less while (33%) did not answer.

#### 7.2.2.5. Barriers

Participants were provided with six common phrases that reflect the barriers when specifying the needs for the subordinates in training. The most common barrier was found to be that “trainees are unable to describe fully their training needs”; this was ticked by (41%) of the respondents. Others stated that the “performance appraisal is not designed to indicate individual training needs” (35%) where as others (18%) stated that the “top management in the company is only interested in the final results of the training”. These three are the most common barriers, however others were less common, for example, “questions on poor performance may cause discomfort for employees” (9%) and “there is no written job description for employees” (9%),

#### 7.2.2.6. Effectiveness of the methods in identifying training needs

Trainers were asked to provide their opinions about the training methods and their usefulness.

**A: Role of experts and specialists**

With regard to experts and specialists, they explained that their main job in training is to “Assist in planning training programmes that meet the actual needs” (44%); to help in the “Detection the weaknesses that can be overcome through training" (31.5%) and finally offer "Help to design training programmes according to need and the ability of the trainees" (31%). 4.5% chose not to answer.

**B: Interviews between trainer and trainee**

When asked to rate how interviews between trainers and trainees assist, participants explained that such method mainly helps to "Identify the problems can be solved with training"(40.5%); "Help to design training programmes in accordance with need and the ability of the trainees" (22%); "Take the shortcomings and weaknesses by an acceptable method with targeted employees" (18%); "Identify the causes of low productivity and how to overcome them" (14%), and finally such techniques help in the "Detection of the main trends of training" (13.5%). 5% of the participants showed no response.

**C. Analysis of performance report**

The benefits of the analysis of performance appraisal report, according to trainers, are mainly to "Disclose weaknesses, which can be overcome through training" (49%); "Reports show the skills gained from training" (20%); "Determine the role of training to overcome the deficiencies in the company" (18%), and finally to "Help design training programmes according to the need and the ability of the trainees" (13.5%).

**D: Discussion between line managers and subordinates**

When asked about the discussion between the line managers and subordinates, the participants stated that such method "Helps prioritise areas that need training" (49%). Also it "Helps to identify problems that hinder the efficiency" (34%), and finally such discussion allows to "Develop the skills to express needs" (26%).

**E: Analysis of job tasks**

When casting their opinion about the analysis of job tasks, it was explained that such method mainly helps to "Help to design training programmes to improve methods of implementation" (27%); For the "Detection the weaknesses that can be overcome through training" (24%) to "Identify the experience required for success" (23%), and such method helps for "Detection of skills that can be developed through training" (22.5%).

**F: Monitoring behaviours in performance**

Further, it was shown that monitoring behaviour in performance "Assists in planning training programmes that address the negative aspects of work" (42%) and to "Determine the quality of training needed by targeted employees" (40.5%). Furthermore, it was explained to "Help to design training programmes include information and skills necessary for trainees" (13%). 6% did not answer.

**J: Analysis of technical reports**

The analysis of technical reports was shown to mainly "Describe the problems faced by the company" (49%); to "Identify deficiencies in the performance of appropriate training programmes" (29%); it "Helps to determine the conditions for the expected performance of the activity" (17%), and finally it "Helps to design training programmes to overcome the negative aspects of behaviour" (10%). 5% provided no answers.

**H: Questionnaires**

Questionnaires were shown to "assist in the indentification of the type of training you need" (39%); to help in "Detecting the satisfaction about all training programmes" (22%), and equally to "Helps to design training programmes in a scientific manner" (22%). Finally, the questionnaire helps in "Showing training needs by self-vision" (20%).

**I: Lists the training needs**

Another method of assessment is for employees to list the training needs, such method mainly "Determines the quality of programmes needed by the candidates" (52%), it helps in the "Disclosure of skills that need to be developed" (23%). Also it "Assists in the design of training programmes appropriate for job" (16%); and finally it helps in "Providing information and knowledge contained in the training programmes" (12%).

### 7.2.2.7. Acting as analysts and experience

Participants were asked how they have acted as an analyst of training needs. The most common answer was that they acted as "part of a committee of training needs" (19%), "executive managers" (13.5%), "part of training programmes committee" (3.6%) and finally as "general managers". However, it was found that the majority of them stated that they have been involved in "other" ways (28%).

Those who have been acting as training needs analysts had various *experiences*, the majority of them stated that they have done that over 10 years experience (37%). followed by 1-2 years (29%), followed by participants who have done so between 3-5 years (19%), while others had 6-10 years (12%).

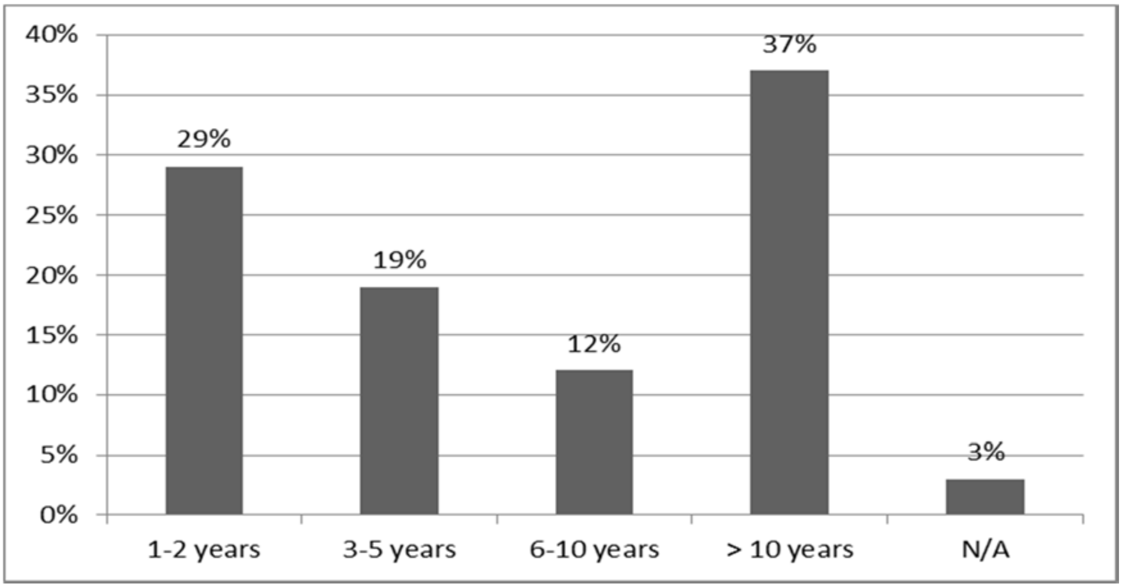


**Figure 7-9: Expericence level of participants**

### 7.2.2.8. Company's commitment

Line supervisors were provided with four statements about the company's commitment to training. It was found that most agree with "The company have a specific budget and a clear ongoing plan for training and development" (49%); "Top management is committed to support and provides all the facilitation to training and development activities" (15%); "The company have a clearly defined strategy relating to human resource development" (14%); and finally, "Executive managers are facilitators of management of training and development activities" (4.5%); Others (8%).

### 7.2.2.9. Formulating training plan and policies

Participants were asked to state where responsibility for training in their company lies. In doing so it was found that "Department or division of training and development" (65%) is the main formulator of training followed by "Middle management (functional managers)" (13.5%); "Top management (chairman, or other members)" (13%), and lastly the "Department or division of human resource" (3%). Some participants stated others to be responsible (2%). 5% of the participants did not provide an answer.

#### 7.2.2.10. Designing and opinions about training programmes

Participants were asked if they have received training on how to design a training programme; it was found that the majority of them (86%) have not received any instruction compared to 9% who had.

Reflects the line supervisors *opinions about training programmes;* firstly, the majority found positive opinions about the usefulness of training, the information learnt from training and meeting the objectives of training. However, a high percentage of participants did not complete this part.

#### 7.2.2.11. Characteristics of training

The place of training seems to be mainly outside the company (abroad) (49.5%), also, the majority of training programmes seems to be long term (40.5%), the content is more specific (69%), and allows for generally mixed information (40%) and it is mostly conducted with other mixed people (55.5%) compared with colleagues.

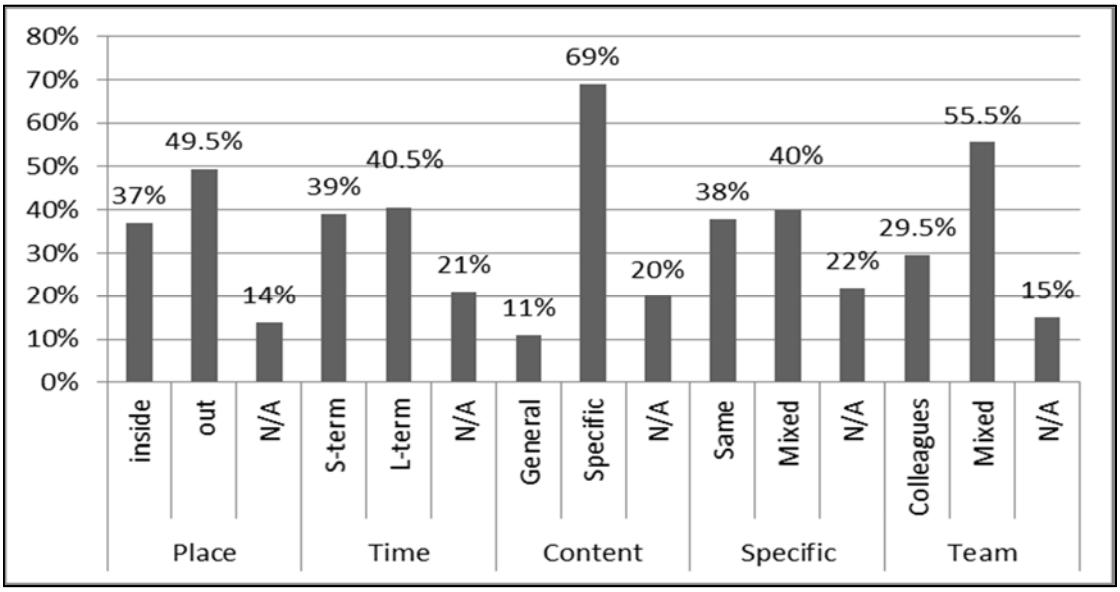


**Figure 7-10: Characteristics of training**

### 7.2.2.12. Company efforts in training process

Participants indicated that the company's efforts in training process were helpful in that "Training helps to know the business requirements of the company" (43%); "The company has provided a favourable environment for training" (27%), and finally "The Company has succeeded in identifying your training needs" (15%).

### 7.2.2.13. Analysing training needs

Line managers indicated that analysing the training needs among employees is considered very important according to the majority (84%), other stated it is important (11%) while only (1%) considered it unimportant, (4.5%) of the participants did not answer.

The answers of line managers show that the companies did not take into consideration analysis of all levels in a comprehensive way. About a third (32%) of line managers (immediate supervisors) stated that they conduct analysis at an individual level, (25%) at an operational and individual level, while the combined analysis of the three levels is about (16%). On the other hand, only (14%) answer that they are analysing training needs at the operational level, (5%) at the organisational level and (7%) analysing training needs at the combined organisational and operational levels; which is weak compared to the importance of analysing the organisational level.

### 7.2.2.14. Methods determining training needs

Line managers indicated that the most used is interviews with the employees (20%) followed closely by direct observation of employees (20%) and thirdly group interviews with managers and supervisors (15%); a training committee was stated by (14%) of the participants while questionnaires were popular among (12%), furthermore performance appraisal (9 %); Job description (6%) and other methods (4.5%) were slightly less followed.

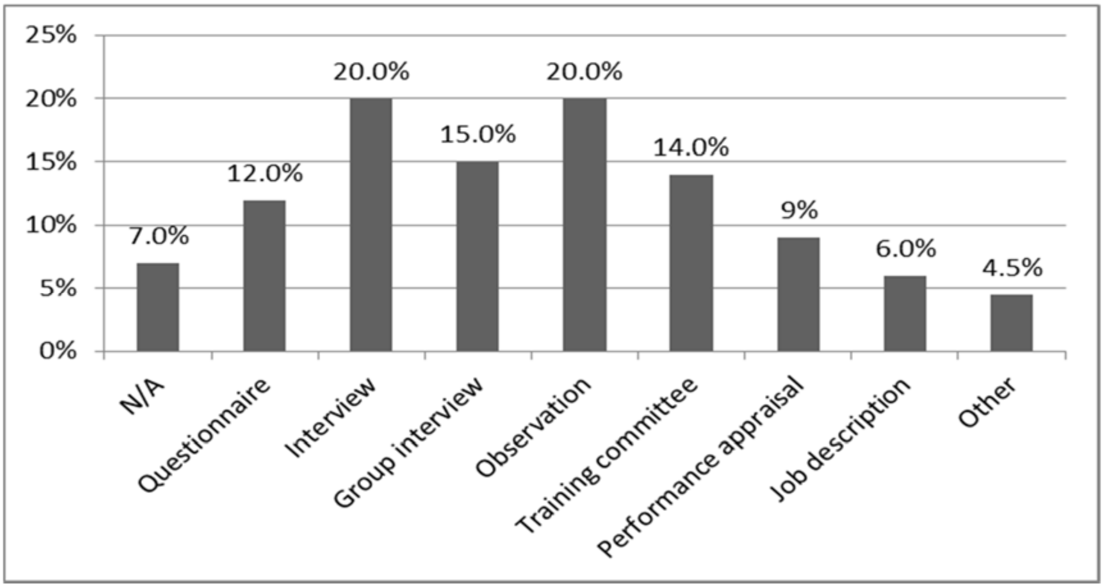


**Figure 7-11: Methods determining training needs**

### 7.2.2.15. Timing of training needs assessment

TNA, according to participants, is conducted mainly on an annual basis (81%), followed by others who stated it is conducted every six months (4.5%), or every three months (2%). However (13%) did not answer.

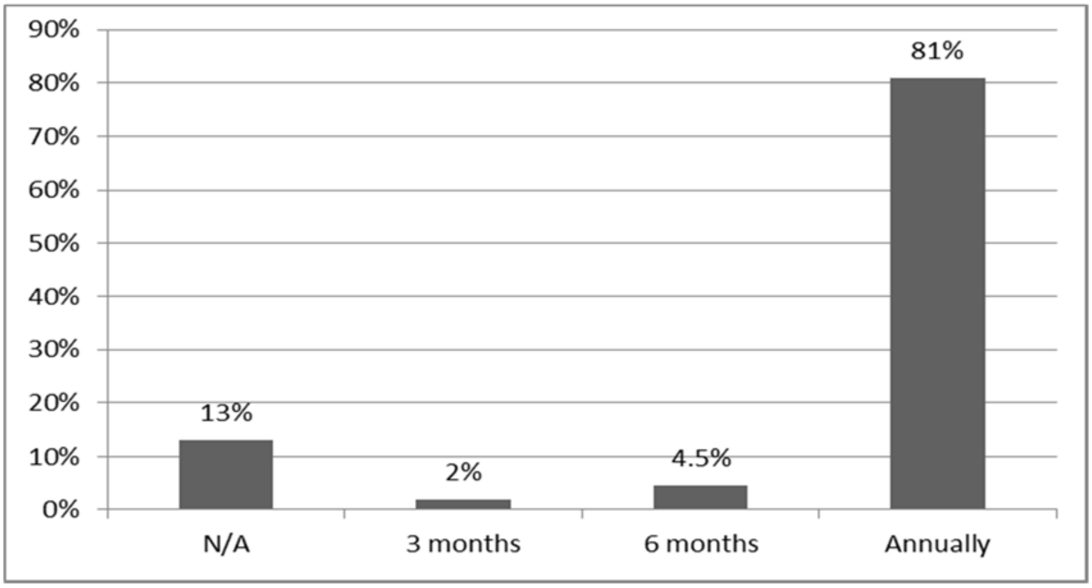


**Figure 7-12: Timing of training needs assessment**

### 7.2.2.16. TNA indicators

Participants were asked to what extent they use given indicators to assess training needs. It was found that the most used indicators were found to be the lack of skills (32%), followed by lack of knowledge (23%), thirdly poor performance

(14.5%) and new work methods (12%). Other indicators were less commonly followed.

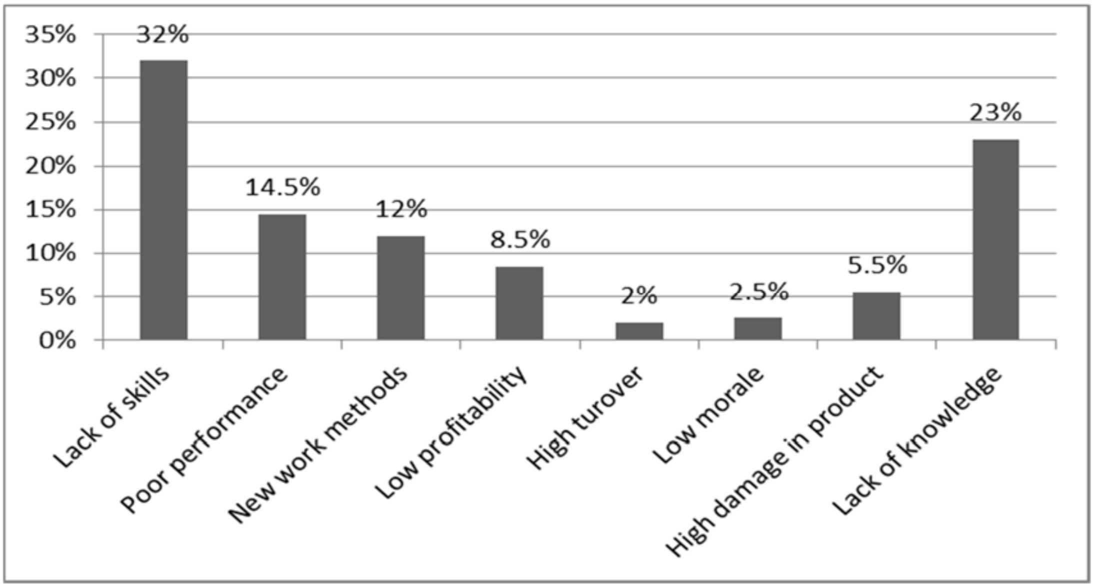


**Figure 7-13: Indicators to assess the training needs**

### 7.2.2.17. Reasons behind training

The timing of training and its needs could depend on a number of factors. Trainers stated that the most common reason to lead to training is “When employees are newly recruited” (43%); “On new equipment” (17%); “On new working methods” (11%). “Creation of new jobs” (1%); “Based on the results of training needs analysis” (11%); “When requested by top management” (10%); “When performance appraisal assessment shows some gap” (7%);  “When requested by departments” (7%); and finally “Compliance with legislation and regulations” (3%); other reasons such as “When employees are upgraded to fill new positions” and  “When requested by employees” received no response.

### 7.2.2.18. Difficulties and challenges

When asked to state the difficulties facing training in the company, participants stated (see Figure 7-14) that the “Lack of specialist employees to conduct the TNA” (57%); “Dependence on line managers in the identification of needs” (34%); “Lack of long-term plan for developing human resource” (34%); are considered the greatest challenge; this was followed by “Lack of Participation of heads of workers in the TNA” (30%); “Lack of long-term plan for developing HRD” (34%); “ Some managers do not care about training” (30%);  “Lack of experience for training management" (27%); "Training objectives are not clear" (23%); "Instrumentality and Nepotism" (19%); other difficulties achieved lower percentage among participants, showing that they are not considered of great challenge such as "Absence of job description" (12%) and "Lack of motivation among employees" (8%).

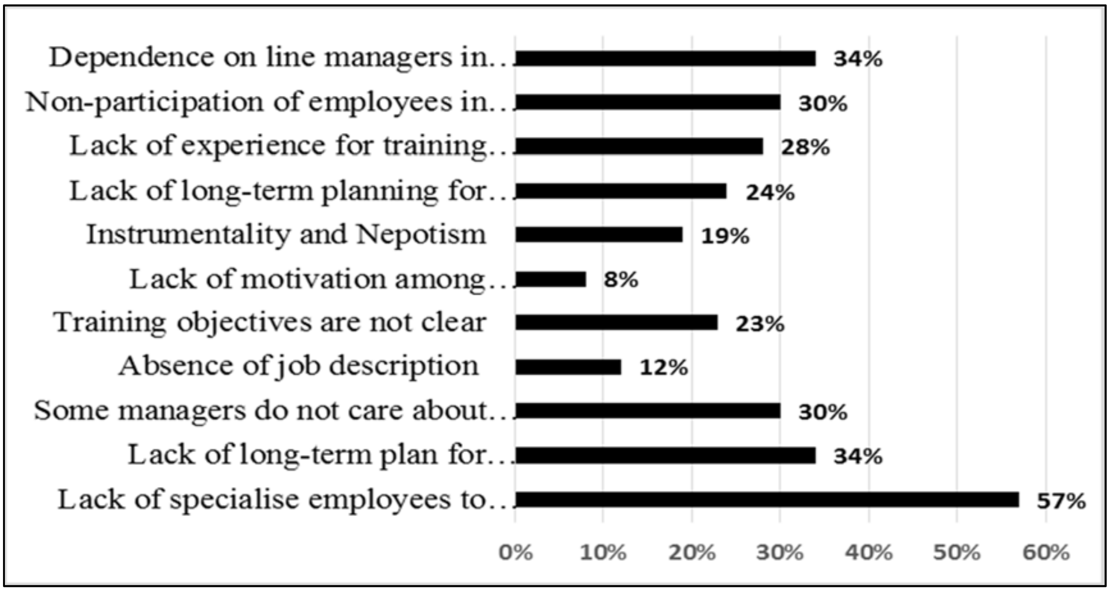


**Figure 7-14: Difficulties facing TNA process**

### 7.2.2.19.Satisfaction with training needs analysis and training programmes

When participants were asked how satisfied they are with the TNA and training programmes the majority stated that they are 'just satisfied' (35%); followed by those who were 'dissatisfied' (28%); and others who provided a neutral perspective (23%); (6%) showed that they were 'very satisfied' and (2%) stated they are 'very dissatisfied', and on an overall score it could be seen that there is slightly more satisfaction compared to dissatisfaction.

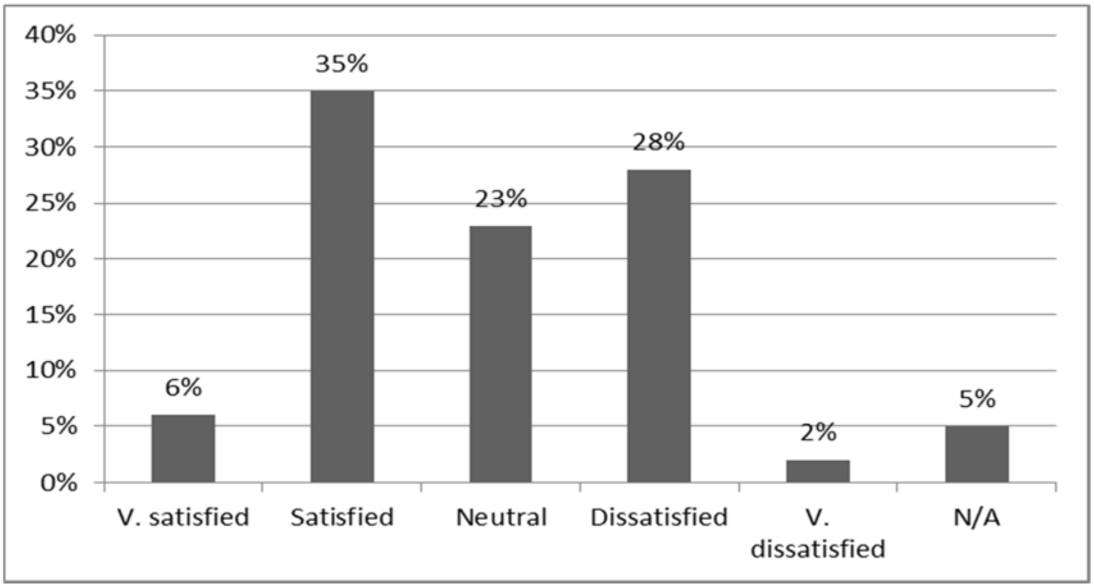


**Figure 7-15: Satisfaction with training needs analysis and training programmes**

### 7.2.2.20. The training impact

The impact of training on the company was measured by asking participants to state which of the given organisstional outcomes are affected most by training. Participants stated that productivity and efficiency (67%) are enhanced most, followed by the increase in job satisfaction (29%) and then the decrease in turnover rate (5%); and equally increase in profitability (4%) and the decrease in absenteeism rate (4%) were the least affected. However, (7%) of the participants provided no information.

### 7.2.2.21. Proposals to improve training needs

Several proposals were selected by the participants to improve the training needs of the company, the most common was the “Awareness of the importance of methods of TNA” (37%); followed by the proposal “To encourage employees to express their needs” (29%); “Adopted policy of training is clear and flexible” (28%); “Training of supervisors and to use various methods of TNA” (16%); the “Interest in the study of technical reports“ (9%); to “Analysis of Functional Performance Reports” (7%); “Issuance of job description for employees” (4.5%); to “Determine the precise criteria for the performance”(2%) and finally to “Clarify the roles of each in the identification of needs” (4%). 7% provided no answers.

### 7.2.3. Those responsible for training

#### 7.2.3.1. Gender, age and marital status

For questionnaire C (Responsible for training participants) All participants were male (100%). The highest percentage of them had an age between 36-45 years old (37%) followed by participants who have an age between 46-55 years old (35.5%), thirdly participants who have an age category between 26-35 years old (21%), only three participants had an age above 50 years old (3%) and only one participant had an age below 25 years old (2%). By looking at the participants' marital status it was observed that the majority of them (91%) are married and only 6.5% were single compared to only 1 participant who was divorced (2%).

#### 7.2.3.2. Education level and place of education

Most participants had a higher diploma or above, the highest percentage of them generated education level of a University degree (45%) followed by a diploma (23%) and a higher diploma (18%), and the higher qualification level generated was a Master's degree (5%). The rest of the participants (9.7%) generated a qualification level below a professional certificate. Most participants obtained their last qualification from Libya (82%) followed by the UK (8%), Italy (6.5%), the USA (2%) and other Arab countries (2%).

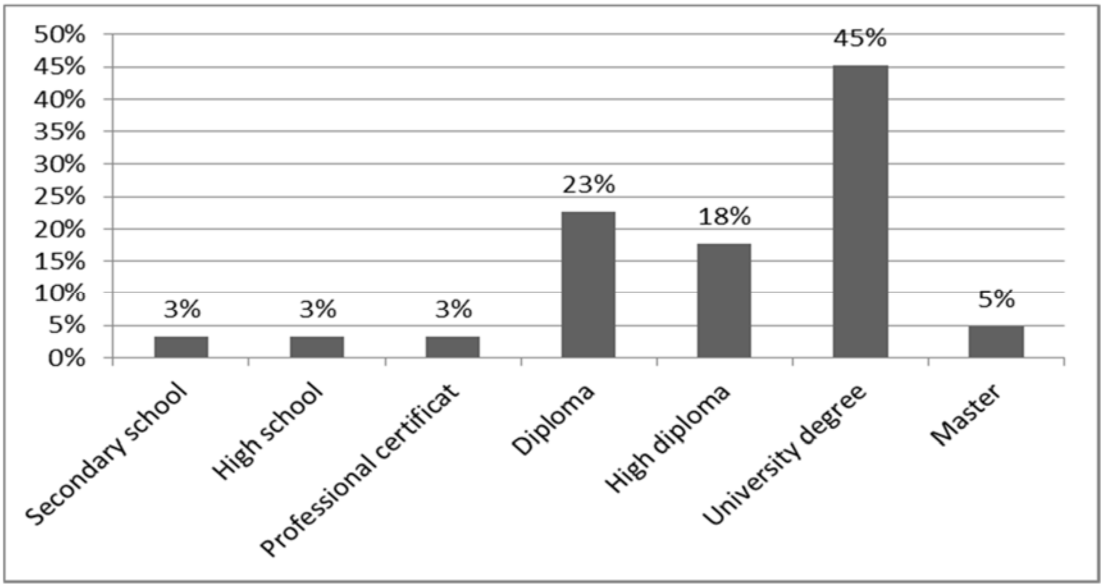


**Figure 7-16: Education level**

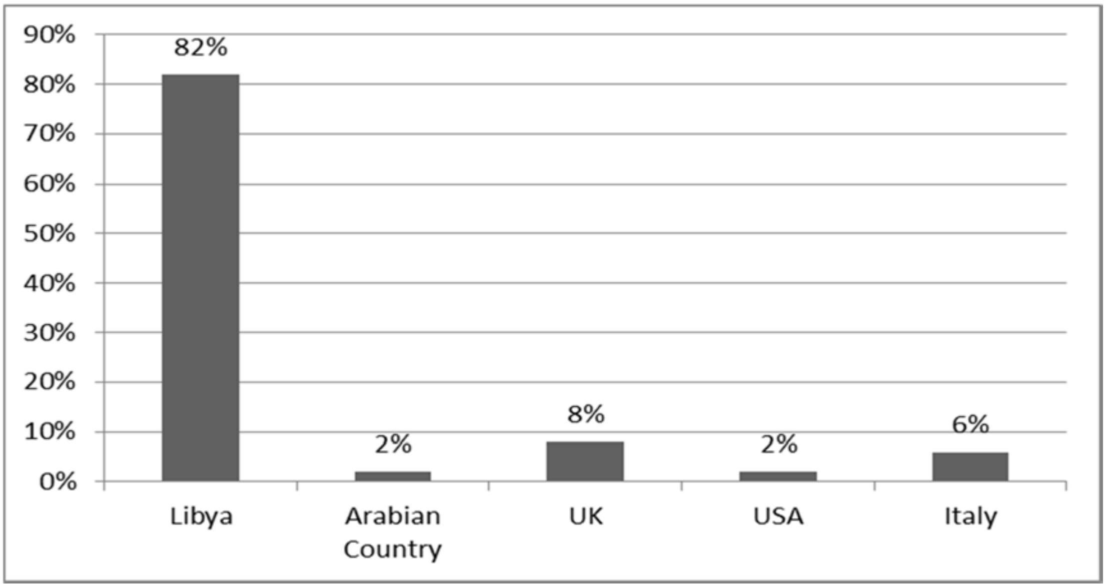


**Figure 7-17: place of education**

#### 7.2.3.3. Experience in company

Participants had varying experience within their company. The majority of them (47%) had been there for more than 10 years, (18%) explained that they had experience between 1-3 years, (16%) stated experience of 4-6 years and (14.5%) had experience of 7-10 years; only three participants had 1 year or less experience (5%).

Most of the participants who answered this questionnaire worked in the Training Department (37%), followed by (32%) who occupied general managers' position and (14.5%) who were training managers. (8%) of the participants worked as senior managers and equal percentage worked in personnel management.

#### 7.2.3.4. Training in company

The great majority of the participants stated that the company they work for has its own training center (89%) compared to (11%) who stated that the company they work for does not have any center. However when asked whether their company has any department, division, unit or section dedicated to training all participants stated "yes" (100%).

#### 7.2.3.5. Characteristics of training

The characteristics and the description of the training that the company offers are indicated in the graph below, see Figure 7.18.

In terms of the location, participants equally stated that training takes place inside a company (50%) or abroad (50%). Most training is considered short (58%) compared to long courses (42%). When asked about the content of training the majority stated that it is often specific (77%) rather than general (23%). When asked about whether training is related to their speciality, the majority affirmed it was (73%) whereas others stated mixed specialties (27%). It appeared that training mostly takes place with mixed people (65%) compared to colleagues only (35 %).

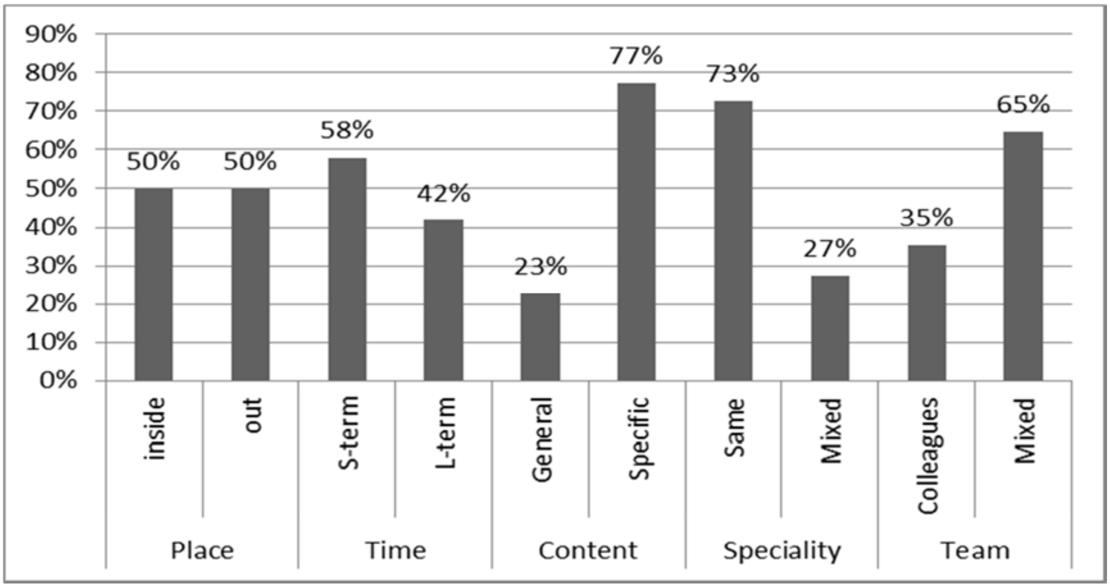


**Figure 7-18: Characteristics of training**

#### 7.2.3.6. Opinion about training

Participants were asked to state their opinion concerning the previously attended training courses. *Firstly* they were asked to cast their opinion on how they found training in general, the majority stated that training was very good (48%), followed by those who considered training to be good (29%), and thirdly (21%) stated that it was excellent. Only one person (2%) stated that it is poor.

The *following* question asked how much they have learnt from the training, The majority (52%) stated that they have learnt to some extent, and (45%) stated that the have learnt to a great extent. Only one person had done so to a small extent (2%) and one had not learnt anything (2%).

The *third* question enquired about how useful they found training to their job, with (34%) stating it was extremely useful, and similarly (34%) stated it was useful and 31% stated it was useful to some extent and only one person stated that training was irrelevant to their job.

The *fourth* question asked about the extent to which the training objectives were met. The majority stated that the objectives of the training were met to some extent (48 %) followed by those who stated that they were met to a little extent (29%), however, 21% stated that the objectives were achieved, and only one person stated no achievement (2%).

#### 7.2.3.7. Timing of performance appraisal

For those responsible for training it was found that performance appraisal is conducted mostly on a annual basis (60%) followed by appraisal every three months (32%) or every six months (8%).

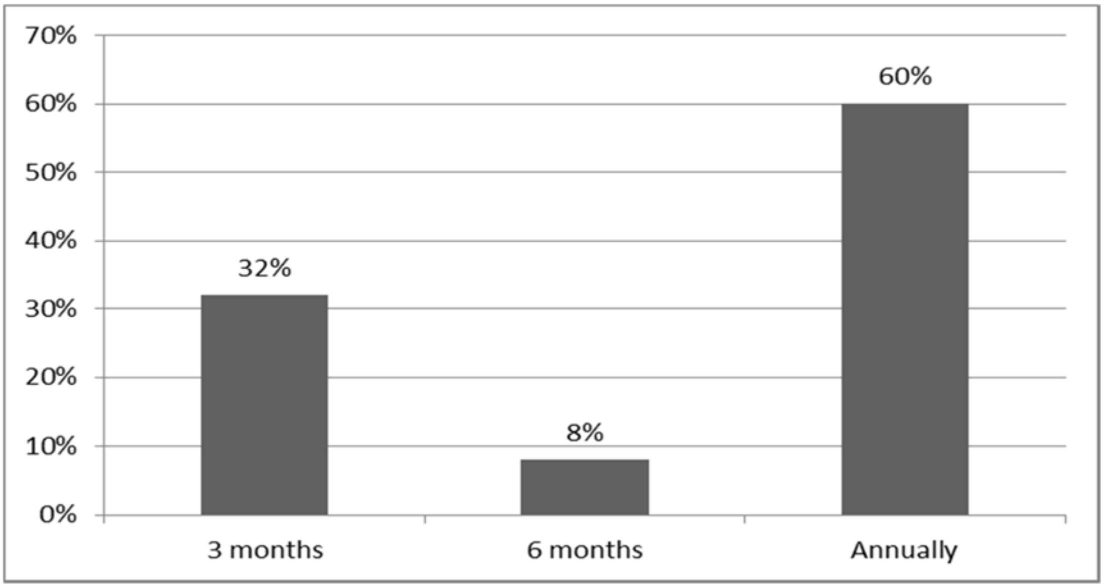


**Figure 7-19: Timing of performance appraisal**

The training function is to improve employees' competencies levels and organisational performance. Therefore, performance appraisal shows the training effectiveness is so important, not only for justifying its expenses, but also to justify the reason for carrying it out.

Can point out that the participants explained that the identification of training needs is very important (77%) compared to (23%) who stated that it is important. No participants thought it unimportant.

### 7.2.3.8. Satisfaction with the training programmes

Participants' *satisfaction* with the training programmes showed that the majority (58%) are satisfied, (18%) dissatisfied, (13%) were very satisfied and (11%) explained a neutral satisfaction.

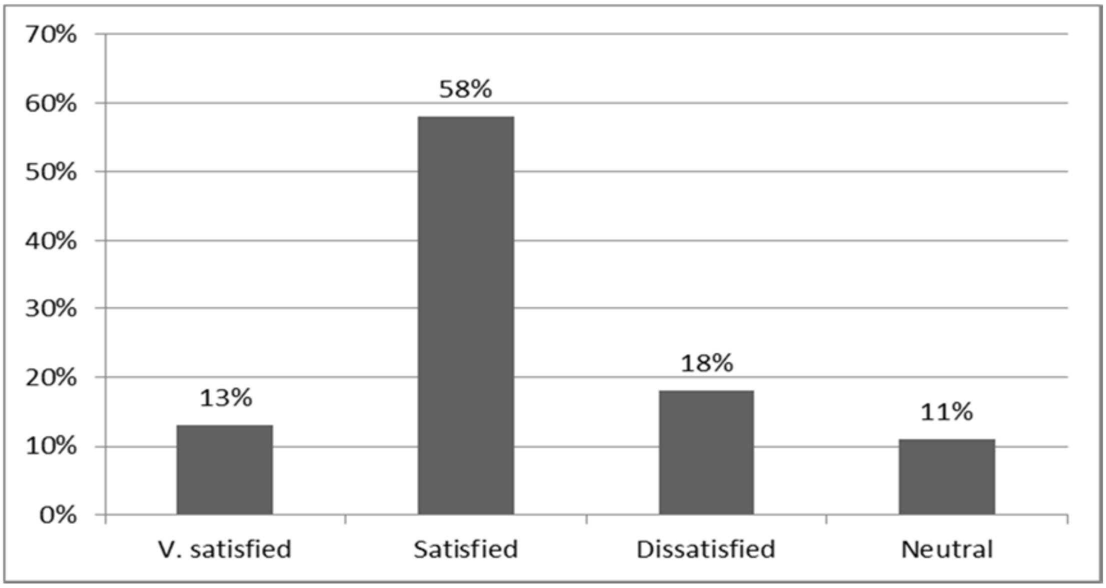


**Figure 7-20: satisfaction with training programmes**

Those results may indicate some problems; poor training needs analysis (TNA), lack of particular management of training and lack of clear strategies and planning for training.

### 7.2.3.9. The training impact

Training appeared to have an impact on a number of factors, however, the majority indicated that the productivity and efficiency of employees is the most affected (60%), followed by (24%) who stated that job satisfaction is most positively impacted by training. Other factors were less impacted by training according to participants' opinion e.g. decreasing staff turnover rate (5%), increasing profits (5%), decreasing absenteeism rate (3%) and other factors (3%).

### 7.2.3.10. Received training and type

On whether or not they have received any training on how to design training programmes the majority of the participants stated no (60%) compared to others who stated that they have received such training (40%).

Of those who received training, it was found that the most popular training area (*type*) was received in “methods of training needs analysis” (13%); followed by “how to plan the training” (10%); “how to deliver training” (6.5%); “methods to evaluate training programmes” (6.5%) and finally “to design training programmes” (3%). Others (61%) stated no training in any of the above.

### 7.2.3.11. Specifying the methods

When specifying the type of method they can carry out, (29%) of participants indicated “I can test trainees' performance as a result of training”; (23%) agreed that “I can carry out questionnaires and interviews for TNA”; (18%) stated “I can conduct interviews/questionnaire to gather data about training programmes' effectiveness” and (5%) agreed “I can use various statistical tools to analyse the evaluation results” . Other stated, “no ability in any of these methods” (23%).

Furthermore, participants were asked to state the processes they have followed when conducting TNA, it was found that the most popular method was documenting the problem (25.5%) followed by reporting the findings (22%), and planning the needs analysis (21%).

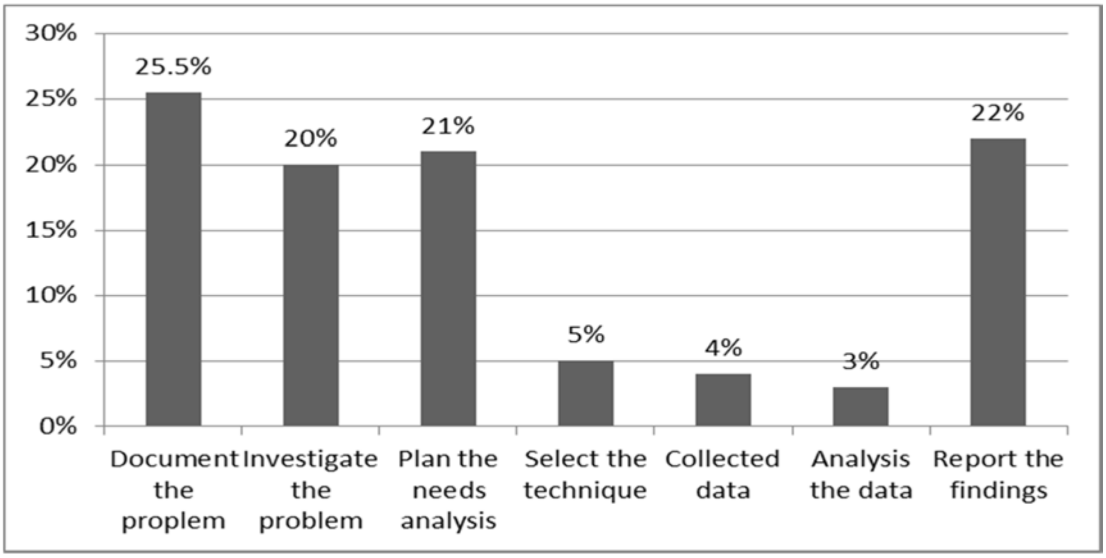


**Figure 7-21: The processes that participants have followed when conducting TNA**

### 7.2.3.12. Methods used to determine training needs

The most followed method of obtaining training needs was shown to be the “questionnaires” (23%); followed by the “training committee” (19%); “interviews with employees” (14.5%); “direct observation” (14.5%); “performance appraisal information" (8%); "through a job descriptions for individuals" (8%); "group interviews with managers and supervisors" (5%); and finally the remainder stated "Other methods" (8%).

### 7.2.3.13. Effectiveness of these methods in identifying needs

***A - Experts and specialists***

According to the participants, experts and specialists help in mainly "Designing training programmes according to the needs & abilities of trainees" (45%), "Assisting in planning training programmes that meet the actual needs" (39%) and finally in the "Detection of weaknesses that can be overcome through training" (21%).

***B - Interviews between the candidate and those responsible for training, or experts***

This method is mainly helpful in the "detection of the main trends of training" (29%); to "identify the problems that can be solved with training" (31%); to "take the shortcomings and weaknesses by an acceptable method with targeted employees" (14.5%); to "help to design training programmes in accordance with need and the ability of the trainees" (14.5%); and finally to "identify the causes of low productivity and how to overcome them" (11%).

***C - Analysis of performance reports***

Analysis of performance reports appears to help mainly to "disclose weaknesses, which can be overcome through training" (56.5%); also "reports show the skills gained from training" (24%); such reports "determine the role of training to overcome deficiencies in the company" (13%); and finally they "help design training programmes according to the needs/ability of trainees" (6%).

***D - Discussion between the line managers and subordinates about their training needs***

It was apparent that such discussions between the line managers and the subordinates mainly "help prioritise areas that need training" (63%); such discussion "helps in identifying problems that hinder the efficiency" (24%) and finally discussion helps to "develop the skills to express needs" (13%).

***E - Analysis of job tasks***

The analysis of job tasks as a method of determining training helps "identify the experience required for success" (39%); "…to design training programmes to improve methods of implementation" (23%); in the "detection of weaknesses that can be overcome through training" (21%) and finally the analysis of job tasks "detect what skills can be developed through training" (18%).

***F- Monitoring behaviours in performance***

The job of monitoring behaviours during employee performance is another method of determining training needs, such method helps to "assist in planning training programmes that address the negative aspects of work" (48%); to "determine the quality of training needed by targeted employees" (30.6%); and finally it "helps to design training programmes including information and skills necessary for trainees" (21%).

***G - Analysis of technical reports***

The analysis of technical reports was explained as a method that "describes the problems faced by the company" (47%); helps to "identify deficiencies in the performance of appropriate training programmes" (27%); it "helps to determine the conditions for the expected performance of the activity" (26%); and finally it "helps to design training programmes to overcome the negative aspects of behaviour"(6.5%).

***H - Questionnaires***

As a method of examining training needs, the questionnaires was shown to be mainly a "help in identifying type of training needed" (44%); helps in "assessing the satisfaction about all training programmes" (26%); "helps to design training programmes in a scientific manner" (18%), and finally, questionnaires are viewed as helpful in "showing training needs by self-vision" (13%).

***I - Lists of the training needs***

Listing the training needs as a method is shown to have an advantage in "determining the quality of programmes needed by the candidates" (37%); the "disclosures of skills that need to be developed" (33%); helping in "assisting in the design of training programmes appropriate for job" (18%) and "providing information and knowledge to be offered in a training programme" (13%).

**7.2.3.14. Acting as analyst:**

Participants have stated that they have acted as analysts of training needs within the company by being "part of training programmes committee" (23%); followed by being "part of committee of training needs" (18%) or as "executive managers" (3%). However, many of them stated "other" reasons (24.5%) and no general managers took part. Others stated that they have not acted as analysts (32%).

The period they have served as training needs analysts varied; experienced participants were the highest proportion stated that they have been doing it for 6-10 years (18%); equally, others stated that they have been doing it for a period of 1-3 years (16%) or between 3-5 years (16%). Others did not provide a time (35.5%).

**7.2.3.15. Company's efforts towards training:**

Participants were presented with some statements regarding the company and the training it provides and showed most agreement with the statement "The company have a specific budget and a clear ongoing plan for training and development" (55%); followed by the statement that "The company have a clearly defined strategy relating to human resource development" (26%); that within the company the "Top management is committed to support and provides all the facilitation to training and development activities" (2%); and that the "Executive managers are facilitators of management of training and development activities" (5%). The remainder did not agree with any of the statements (13%).

**7.2.3.16. Company efforts in training process:**

Participants assessed the company efforts in the training needs; the majority explained: "The company has provided a favourable environment for training" (31%); "The Company has succeeded in identifying your training needs" (29%); "Training helps to know the business requirements of the company" (27%); other participants chose not to answer (13%).

### 7.2.3.17. TNA indicators

When determining the training needs, participants were asked which on a given list is the main indicator. When answering this question it was evident that "Lack of skills" (31%) was the most used indicator followed by "Poor performance" (24%); "Lack of knowledge" (23%); "Introduction of new work methods" (8%); "Low profitability" (5%); "High turnover" (2%); "Low employees morale" (2%); "High damage in product " (2%). However none of the following indicators were followed "Upgrade and transfer employees", "High absenteeism","Increase the accidents at work", "Increase the costs" and "Other".

### 7.2.3.18. Reason for training

According to the participants, training is provided mainly "When employees are newly recruited" (43.5%); "When performance appraisal assessment show some gap" (11%); "Based on the results of training needs analysis" (11%); "On new working methods" (8%); "On new equipment" (5%); for "Compliance with legislation and regulations" (5%); "When requested by departments" (5%); for the "Creation of new jobs" (3%); "When requested by top management"(2%) or for "Other" reasons (5%). However, no participant stated that training is provided "When employees are upgraded to fill new positions" or "When requested by employees".

### 7.2.3.19. Difficulties and challenges

The aim of this part of the questionnaire was to assess the difficulties and the challenges facing TNA. Participants were given the choice of common difficulties and they were asked to select which is considered a difficult. In doing so, it was found (see Figure 7-22) that the "Lack of specialist employees to conduct the TNA" (60%); "Lack of Participation of heads of workers in the TNA" (45%); "Lack of long-term plan for developing HRD" (37%); "Dependence on the line manager in the identification of needs" (35%); "Lack of experience for training management" (32.5%); is considered the greatest challenge; this was followed by "Training objectives are not clear" (26%); "Instrumentality and Nepotism" (25%); "Some managers do not care about training" (20%); while the other difficulties achieved lower percentage among participants, showing that they are not considered a great challenge such as “Lack of motivation among employees” (9%); “Lack of long-term plan for developing human resource” (6.5%); “Absence of job description” (5.5%).

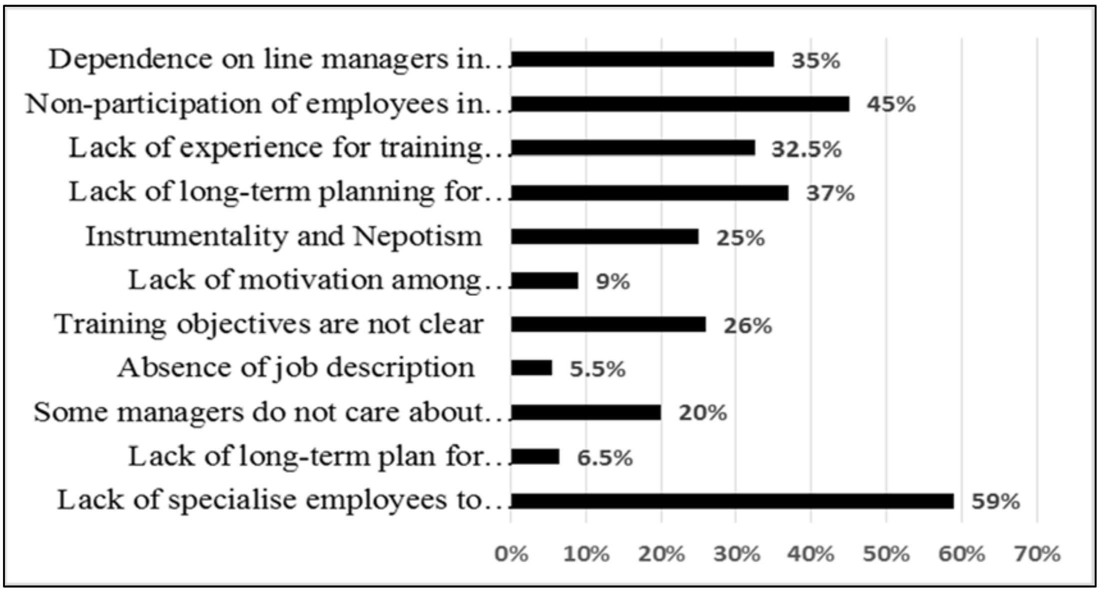


**Figure 7-22: Difficulties facing TNA process**

It should be noted that line managers and those staff responsible for training were each asked to state the difficulties and challenges faced during training needs and analysis in their companies. Based on a comparison of the data in Figures 7-14 and 7-22, the participants seemed to agree that the greatest challenge and difficulties faced are as follows:

1. “Lack of specialised employees to conducting the TNA”.
2. “Dependence on the line managers in the identification of needs”.
3. “Lack of long-term plan for developing HR”.
4. “Lack of Participation of heads of workers in the TNA”.

### 7.2.3.20. Proposals to improve training needs

Participants who are responsible for training were asked to select the common proposals to improve training needs. It was found that the “*Awareness of the importance of methods of TNA”* (42%) is the most common proposal followed by *“Adopted a policy of training and clear and flexible”* (23%); *“Training of supervisors and to use various methods of TNA”* (11%); *“Analysis of Functional Performance Reports”* (5%) and other proposals received less selection amongst the participants.

Chapter 8 will provide a discussion of the findings, as applicable to TNA in the LICs.

# Chapter 8. Discussion and Findings

## 8.1. Introduction

One of the conclusions from the literature review is that training and development is one of the key drivers for organisational success. Therefore, organisations need to pay attention to the training and development of their staff and building their skills to help them to undertake their current and future duties effectively and efficiently. Further, training and learning should be regarded as an integral part of an organisation's investment plan, and should be coordinated with the general strategy of the organisation. In the West, the initial step in any systematic training cycle is to analyse the training needs required in TNA levels. According to the data, this is not so in the LICs selected.

Based on the initial stage within LICs, and interviews with various managerial levels, the researcher believes that there are different barriers affecting quality of training and training policy. Mohamed (2005) recognized that there was no analysis of training needs in most LICs, and thus no clear policy of TNA. According to the report by General People's Committee for Popular Control and Observation (GPC, 2009), the practice of the training and development process in Libyan industrial companies has been marred by a number of shortcomings, which have manifested in the low level of performance. In addition to inspecting and auditing corporate financial accounts, which are subject to supervision by the GPC, the researcher has provided training courses, through the Consultative Centre of Training at the University of Misurata and identified phenomena confirming the problem:

1. Many managers agree to the request of their employees to attend some training courses.
2. Approval should be in the form of a grant through the social relations between users and their superiors.
3. Lack of interest in training among many supervisors at the different administrative levels.

4. Lack of expertise in terms of training management such as a specialist in training, which would determine the appropriateness of training programmes according to the goals and needs of each company.
5. When a decision is reached regarding training, the trainee's willingness and academic qualifications and desire to participate may not be taken into account, as training is considered as one of the incentives that can bring only material gains for trainees.
6. Training departments may not be as interested in studying the training gap and in identifying training needs accurately as they are interested in providing training programmes at home or abroad in order to more or less justify its existence in the organisational structure of companies.
7. The absence of an information base specifically used for the evaluation of training programmes that can be used to assist senior management in making decisions on future training plans.
8. In general, a lack of awareness of the importance of training processes.

The training practices in Libya are standard implementations of the OTP framework, as an approach to TNA (Agnaia, 1996). This is, therefore, indicative that such training model could be studied and investigated in Libya.

In order to understand the whole of the TNA process, various questions regarding the following were asked: the importance of TNA, regularity of conducting TNA processes, TNA levels, data collection methods, the analysis techniques, indicators of TNA, offering training, improving used methods and the effective methods.

This chapter aims to discuss the findings that have emerged from the data analysis presented in Chapters 6 and 7, linking the theory with the empirical research. It provides interpretation to reflect the quantitative and qualitative results presented in those chapters and provides comparisons with other related studies regarding the findings related to the current TNA practices in LICs.

## 8.2. Regularity of conducting TNA

The questionnaire asked how often the company conducting the TNA, with the analysis revealing that (64%) of participants declaring that their companies conduct TNA every 2 to 3 years and conduct TNA on a regular basis. But conducting TNA on a regular basis does not always reflect the effectiveness of conducting effective TNA process. The researcher believes that this view of managers responsible for training is not based on the annual plan for training, but on the needs analysis process. It is not necessary to conduct every year, but it must be done when the company needs it. This demonstrates that the purpose of TNA is to ensure that objectives of each type of training are compatible with the strategic objectives of the organisation.

## 8.3. Analysis levels of TNA

Through three levels of analysis, the TNA aim is to answer the three questions; "*where training is needed*", "*what needs to be taught*" and "*who needs to be trained*". The information regarding those questions is beneficial in designing an effective training programme. literature.

The questionnaire was conducted to explore a view of supervisors regarding analysis levels and enquired of the levels to determine the training needs in their companies. The results show (see 7.2.2.13) that companies did not take into account all levels when analysing, although they may use more than one level. Almost a third of line supervisors (32%) stated that they analyse at an individual level, and (14%) analyse at an operational level, with 5% analysing at the organisational level. Approximately (16%) analyse using three-levels. Previous results show that the companies selected for this study focus on the individual level.

The majority of participants (84%) commented that their companies were not paying attention to the three-level analysis, and only paid attention to an analysis of the individual level. The answers can be summarised as follows:

1. The company is still suffering from the failure to follow the scientific method in identify training needs, because of a lack of experience of those identifying the training needs and preparing a training plan.
2. The company is dependent on a request from trainees to attend courses they desire.
3. The company determines the individual training needs in accordance with the requirements of the work by sending a special request to the heads of departments

to identify training needs and provide to training management the information model for those needs.

The researcher believes that the concentration of selected companies on the individual level of analysis can be attributed to several reasons, among them: lack of experience, non-qualified and lack of familiarity with nature, purposes, tools and techniques of analysis.

Questionnaire (B) asked *‘When is training provided for employees?’* to establish the reasons behind training (see 7.2.2.17). The supervisors stated the most common reason is “when employees are newly recruited” (43%); then “on new equipment” (17%); followed by “creation of new jobs” (11%); in the fourth ranking “on new working methods” (11%) and “based on the results of training needs analysis” (11%); in the fifth ranking is “when requested by top management” (10%); while in the sixth ranking “when performance appraisal assessment show some gap” (7%) and “when requested by departments” (7%).

The previous answers provide a fairly clear picture that the supervisors not qualified and not able to analyse training needs, therefore, cover the required numbers for training annually through a list of new employees or through candidates running new equipment or due to changes in working systems or methods. Moreover, the line managers are dependant upon discussions and direct observation when nominating their subordinates to training courses. They do not need to use the analysis techniques or the link between the needs of individuals and the needs of the company. This is another indication of the lack of experience and knowledge and skills in the identification of needs..

The training needs should be understood and catered at all three levels and an ideal training design addresses the varying needs of the employees, tasks to be performed and the overarching goals and objectives of the organisation. Chapter 9 will provide the suggested model based on the fundamentals following:

1. This suggested a model of the TNA consists of four main stages.
2. Before taking the decision to undertake TNA, which requires a company to identify performance problems and have the full support of top management, it is necessary to identify the areas of assessment, and the costs and resources for training programmes.

3. Training is a systematic process of providing an opportunity to teach employees' skills, knowledge and abilities for their tasks in their current and future jobs.
4. To make TNA more effective, it should be based comprehensively on three levels of analyses: organisational, operational and individual needs; not just on one source of analysis.
5. Three-level analysis should be interrelated, built on each other to produce a complete statement of the needs.
6. The analysis of organisational level aims to determine the departments that need training and the most favourable conditions to be implemented in line with anticipated changes in the future.
7. Analysing the needs in operational level aims to understand the tasks, how they are to be performed, and what the requisite knowledge and skills are to perform those tasks.
8. The individual level analysis aims to evaluate the level of performance for each individual and to compare this with the requirements for the performance of his job to identify any deficiency in skills, knowledge and abilities.
9. Use of appropriate methods to collect data from the three levels and also suitable techniques to analyse training needs at those three levels.
10. Establish a management of training and its support from specialists qualified with the necessary training experience.
11. Determine the problems that can be solved through training because training is not an appropriate or effective prescription for every performance issue.
12. There are six basic factors to be observed in setting priorities for meeting training needs which are impact, scope, organisatio policy, time, need type, and feasibility.

## 8.4. Formulating training plans and policies

The plan is a scientific document illustrating training activities proportionate to the training needs of employees. Also, it shows the timetable of courses and the titles, the contents and places of execution.

Participants were asked to state who is responsible for the training in their companies (see 7.2.2.9), and it was found that “department or section of training and development” (65%) has the main responsibility for training plans.

Questionnaires provided four statements about the company's commitment to training (see 7.2.2.8 and 7.2.3.14); it was found that most agree with is that the "*The companies have a specific budget and a clear ongoing plan for training and development*" (55%, in NCC) and (49% in LISCO).

All participant agreed that the HRM is the main party responsible for planning/proposing the training for employees, and preparing plans for approval (see 6.3.4 and 6.4.4). They explained that this department is considered the backbone of the company: "*HR department is essential in any company, whether it is small or big, and when talking about training, it is the responsibility of this department to make suggestions and take decisions*".

This study found that the selected companies did not have long-term plans and most planning was implemented in the short-term or "during a year". It appears that the plans for training in the LICs are not in an advanced state, and the company should formulate the strategies of HRD and translates them to objectives to be linked with the training policy.

A line manager in LISCO said, *"By conducting some processes to specify the training needs, which depends on ISO system .........".* Therefore, when training depends upon the ISO, it neglects the strategic approach of TNA.

## 8.5. Nomination of employees for training

Most participants indicated that the selected companies used questionnaires, interviews, performance evaluation and direct observation, which indicates that employees were directly in contact with their managers to know their real needs.

These methods are commonly given a clear indicator that the identification of training needs depends on opinions of managers and supervisors. For example, in interviews with the line manager or through direct observation from manager or supervisor they are deciding whether or not employees need training. Even questionnaires completed by the employees allow managers and supervisors to make a decision about the needs of those employees. Also, the performance appraisal report concludes with the personal opinion of the manager and supervisor for the activity, behaviour and the ability of the employee and their recommendations.

Questioning of technicians in companies about their selected by methods of their nomination (see 7.2.1.5) pointed to several methods used to nominate employees for training and the most common one is that the nomination is decided by the head of the department (61%); the second method is the nomination by line manager (17%); and line supervisor (10.5%), while the other methods (12%) such as training department, performance appraisal and as a reward being used. Reliance on the views of managers and supervisors in identifying training needs is very interesting for a number of reasons including them not understanding what their subordinates need because of a lack of expertise in requirements analysis, usually, some managers and supervisors prefer certain employees because they are relatives or friends (Agnaia, 1996), especially when the training programme is abroad. Also, sometimes they do not choose and nomination the employees who work hard to ensure the continuity of work.

Satisfaction with the TNA and training programmes varied among participants (see 7.2.1.13, 7.2.2.19 and 7.2.3.7); those who were only satisfied being technicians (40%), line managers (35%) and those responsible for training (58%). These percentages reflect a dissatisfaction of staff but the main factor may not be only the views of managers and supervisors.

**Table 8-1:** The characteristics and the specifications of the training programmes in the selected companies questionnaires.

| No. | Characteristics | Specifications | Type of questionnaires | | |
|---|---|---|---|---|---|
| | | | A | B | C |
| 1 | Place | Inside | 73% | 42% | 50% |
| | | Outside | 27% | 58% | 50% |
| 2 | Time | Short term | 75% | 48% | 58% |
| | | Long term | 25% | 52% | 42% |
| 3 | Content | General | 29% | 12% | 23% |
| | | Specific | 71% | 88% | 77% |
| 4 | Specialist | Same | 50% | 46% | 73% |
| | | Mixed | 50% | 54% | 27% |
| 5 | Team | Colleagues | 35% | 34% | 32% |
| | | Mixed | 65% | 66% | 68% |

There are other factors such as characteristics of training, place, time, content and groups that may have an impact. On another hand, there is a question for all participants about the characteristics and the specifications of the training programmes in the selected companies, and answers are provided below see Table

(8.1). The place of training seems to be mainly internally of the company, also, the majority of training programmes seems to be short-term, the content is more specific, specialities different (mixed) and the programmes mostly provide with mixed employees. This accords with percentages shaded in the Table 8-1. These percentages are acceptable to some extent and the researcher believes that this parentage is not influential on the satisfaction of employees regarding the TNA and training programmes.

## 8.6. Evaluation of the training plans

The evaluation of results of the training programmes is the most critical stage in the training cycle process and provides some indicators of the effectiveness of training in achieving the objectives or not and helps to improve future training programmes. If the TNA aims to find out whether staff require trained or not, the training evaluation aims to see whether training is beneficial or not. On another hand, Altarawneh (2005:70) argues "*Training is a tool used to change people's behaviour, while evaluating training effectiveness is centred on measuring that change*".

In terms of post-course training evaluation most interviewees (see 6.3.13 and 6.4.13) stated that this procedure is partly absent in the selected companies. There was some inconsistency between the respondents; in LISCO participants stated that the training evaluation: "*still irregular, eclectic and random, at times we have an evaluation and many other times we do not do so*" whereas in NCC most of the participants stated that "*evaluation does happen, however they explained that it is not up to standards*".

In the same vein, some of the interviewees stated that the evaluation of training plans "… *can be done through the main way it's questionnaires and also the periodical reports on the plan by the Training Department*".

This meant that there was no formal mechanism for giving feedback to training departments or to the training centres that would encourage quality improvement of courses in the future.

There are many training evaluation methods, however, the interviews do not include the question about those methods, due to the aim of the question to know how to evaluate training in those companies. According to answered from interviewees that the company was interested in reactions, opinions and impressions and attitudes toward the training course at the end of each programme of each participant. Therefore, it could be said that the evaluation is important when identifying training needs for the next plan. Moreover, companies should adopt a model for evaluation to cover other items of evaluation such as learning gain, behaviour change and results level.

The researcher believes that it can seek the opinion of the line supervisors to support the results of the assessment process, although this was not mentioned by any of the other interviewees.

## 8.7. The participants' experience in the field of TNA

From the participants who were line managers and responsible for TNA in the selected companies, in general, (74%) have worked more than 10 years in their respective company (see 7.2.2.3 and 7.2.3.3). Moreover, in general, (46%) have a university first degree and (26%) have a higher diploma (see 7.2.2.2 and 7.2.3.2).

Nevertheless, the question relates to whether or not they have received any training on identifying training needs (see 7.2.3.9). The majority of the participants have not (60%) while others have received such training (40%). Of those who received training, (13%) was in “methods of training needs analysis”. While, (61%) stated they had not received training in identifying training needs.

From the question for technicians about satisfaction with the training programmes (see 7.2.1.13), (40%) were only satisfied. On balance and overall there seems to be a slightly higher percentage of dissatisfaction compared to satisfaction.

Accordingly, the questionnaire assesses the difficulties and the challenges facing TNA in selected companies (see 7.2.2.18 and 7.2.3.19); it was found that (58.5%) stated that the lack of specialized employees to conduct the TNA was the most common difficulty.

Therefore, it could be argued that, in general, the officials identifying training needs in LICs lacked practical experience in the field of TNA. This finding was supported by the answers of the senior managers about TNA personnel in their companies (see Chapter 7) stated that their companies lacked well qualified, experienced TNA employees and need to be specialized and know how to conduct effective training programmes. Their comments indicated "*There is a lack of expertise to carry out the training needs analysis process*" and "*Identifying training needs in the current situation based on personal experience for line supervisors as well as the views of workers in the selection of the training programme that suits them*".

Raising the level of executives and those responsible for training through the training on the use of the methods and techniques of assessment and training needs analysis.

This finding namely, the lack of qualified and experienced staff has had a negative affect on training and developing employees, was found by many other Arab researchers and authors including Agnaia (1996); Altarawneh (2005); Elfazani (2011); Rodič *et al.* (2012); Shah and Gopal (2012): Alkinani (2013).

## 8.8. Findings relating to TNA process

The findings associated with the current TNA process are categorized as follows:

### 8.8.1. TNA indicators

Chapter 7, show that the majority of participants stated that the most used indicators when identifying training needs are the lack of skills, lack of knowledge and poor performance (see 7.2.2.16 and 7.2.3.17). While new work methods, low profitability, High damage in product and high turnover that were least used TNA indicators. This implies that these organisations have not yet considered or recognised the importance role of TNA on their organisational performance.

No participant stated that the selected companies used the other indicators e.g. upgrade and transfer employees, high absenteeism, increase accidents at work and increase costs or any others indicators for training needs. It appears that the selected companies concentrate on fulfilling developmental needs for their employees rather than performance problems.

In section (3.10.) Taylor et al. (1998) claimed that in most cases performance problems are the consequence of the influence of work environment issues that need adjustments in order to improve actual performance rather than changes in relation to the workers' knowledge, skills and attitudes.

According to Olivas' model (2007:38) (see 3.10.2.1) TNA helps companies to use an array of methods to investigate what they engage in when assessing training needs, as well as the ways in which they might make improvements such that they are in a better position to make an effective and efficient use of the money invested in training.

### 8.8.2. Reasons behind training

This section discusses the provision of training in selected companies in Libya, which are included in this study. Eleven different situations were defined, through which training is offered to the employee in the company (see section 7.2.2.17 & 7.2.3.18, the Appendix 6 questionnaire form (B&C), and can be classified into three groups: during change, upon requests and after evaluation, to explain the process of providing training.

**Table 8-2: The answers of the participants about when is training provided**

| The Groups | Situations of providing training | Form B | Form C |
|---|---|---|---|
| During change | When employees are newly recruited | 43.2% | 43.5% |
| | On new working methods | 1.8% | 8.1% |
| | On new equipment | 17.1% | 4.8% |
| | When employees are upgraded to fill new positions | -- | -- |
| | Creation of new job | 10.9% | 3.2% |
| | Compliance with legislation and regulations | 2.7% | 4.8% |
| Upon requests | When requested by top management. | 9.9% | -- |
| | When requested by departments. | 7.2% | 4.8% |
| | When requested by employees | -- | -- |
| After evaluation | When performance appraisal assessment show some gap | 7.2% | 11.4% |
| | Based on the results of training needs analysis | 10.8% | 11.4% |

Table 8.2 shows varied answers of the participants from the line managers (B) and those responsible for the training (C), which includes most of the cases where the reason for the training is stated. 43% of participants said that the most common reason for training is "when the employees are newly recruited", while other situations varied between (17% to 3%). However no participant stated that training is provided "*when employees are upgraded to fill new positions*" and "*when requested*

*by employees*", which suggests that they were not fully aware of the many reasons why training should take place.

In order to support this, those interviewed from selected companies mentioned that the major reason for setting up training for technicians in their company are "*The training needs are decided according to any changes or adjustments that may arise in terms of the job description, or upon new employees joining the existing workforce, or advanced technologies and modern practices introduced into the company*" and "*that such needed training are performed based on the need for them only*" (see 6.3.3 and 6.4.3).

There are likely reasons for the lack of staff training when you upgrade or according to the request of the staff or management, because the companies are pessimistic of the training arguing that they might be moving to other organisations. They believed that these employees after obtaining information and acquiring skills then leave the company to obtain higher salaries in other companies. Supporting this view are the answers in the above Table 8.2 that about (43%) of training provided has been given to new employees. However, the researcher believes that the commitment of industrial companies to adopting a framework for needs analysis on three levels of TNA will lead to knowing the causes of performance problems and identifying those problems that are not solved by training, for example, wages and salaries, benefits, bonuses and work environment. It should be noted here that the older employees possess several characteristics and desirable job-related attributes that include: fewer accidents, generating a positive image, the ability to learn as much as younger workers, self-motivated, disciplined, have a respect for authority, and are happier or more satisfied on the job (Magd, 2003).

### 8.8.3. Distinguishing between skills

Those interviewed were asked if the selected companies distinguish between technical, professional and behavioural skills when doing training. In answering, it was agreed by the majority of participants that their company does distinguish between skills based on the needs (see 6.3.10 and 6.4.10). Most of the participants stated the that "*there is no distinguishing between skills, and there is no attempt to do so*" and "*there is nothing like that, the company orders training based on demand,* *if there is a need there is a training regardless of the type. We are not professional enough to distinguish and study the needs in such details*".

The researcher believes that the technical courses were devoted to those who are a specialist in the technical field and professional courses to those individuals in the field of their professional specialisation. In the differentiation between skills, there is a lack of attention and awareness in those companies about identify soft skills related to modifying behaviour. This is a matter of significance as a basis for facing the competition between the companies.

Perhaps the answer to some of those interviewed on the relationship between training and performance appraisals shows that focus on the technical skills only and not others, and which they consider most useful from training (see 6.3.11 and 6.4.11). One participant stated that based on his experience "*that although there is usually a link between training and performance some of the training programmes are not noticed for their benefits especially the non-technical training*" and other state "*not all training may useful, some of which is actually useless and is a waste of money and time, it is hard to see the benefit of some non-technical training*"

The lack of differentiating between technical, professional and soft skills may have caused this absence of particular measures, and clear standards. For example, job description and standards of performance appraisal. This was discussed by one participant who stated: "*The employee's candidacy for training is not associated with the report of the annual performance of the candidate for the reason that there is no job description of the tasks include more detail to reveals the processes that should be done by the employees to perform their duties*".

On another hand, in questions about indicators of performance appraisal (see 6.3.10 and 6.4.10) the majority of participants stated: "*The company depends on the evaluation terms comprised in the annual reports, which are general items, ............*"

Also, three groups of participants stated that *"the indicators of performance appraisal do not exist....."*., *"Unfortunately, there are no written indicators according to which employees' performance is evaluated"* and *".... managers and supervisors do not really know how to assess the performance, and when they do they provide generic outcomes....."*.

Moreover, some respondents of questionnaire (B) about job description (see 7.2.1.10) explained their duties and responsibilities, (23%) explained that they have no written job description. Then participants were asked to state whether this job description is related to what they actually perform or do in their jobs and it was found that (24%) stated it is not related to what they perform in their jobs, however a high percentage of participants chose not to provide an answer (23%).

### 8.8.4. The used TNA methods

There are various methods for collecting data from relevant employees such as questionnaires, interviews, observations, group discussions, records and reports and job description analysis. The method used to obtain statements and information are depends on the types of data required, whether quantitative or qualitative or both. Each method has both advantages and disadvantages; it is usually recommended to rely on more than one method in the TNA process in order to produce the most reliable outcomes. Before initiation of the process of data collection and information, those responsible for training determine the purpose and objectives of the training so that it can determine the quality of those data and information clearly and suggest a use of the appropriate methods.

To indicate that TNA methods seem to be slightly different in some groups, the majority of participants indicated that the most used in identifying training needs are interviews with the employees, followed by questionnaires; group interviews with managers and supervisors ranked third while performance appraisal and job description came fourth. The other methods such as direct observation, focus groups, examinations and assessment centres were slightly less followed.

It appears that no different data gathering methods are used by the companies of different sizes and industries while the difference in an application depends on the skills and experience of practitioners of the TNA process in identifying training needs.

For the two selected companies, the answers varied, although they agreed on the four most commonly used methods, and this can be attributed to the lack of sufficient knowledge, the necessary skills and experience required in the field of analysis of training needs (see 7.2.2.14 and 7.2.3.12). Moreover, through interviews with a number of managers and administrators of training (see 6.3.14 and 6.4.14) disclosed that the same methods are used in the trainees' evaluation such as questionnaires, interviews, performance evaluation and direct observation.

One explained that there is a need for better evaluation: "*I would say that the traditional ways of evaluation be it questionnaires or interviews are old, we need to start using online questionnaires and online feedback that should be open to all employees*". Another participant explained: "there are a number of ways to evaluate, the easiest way would be a short questionnaire, but at times I find it appropriate to have interviews or observations".

## 8.9. Findings related to difficulties and challenges

Difficulties in general terms describe the challenges facing the implementation of the process of correctly identifying training needs,

This section examines major challenges faced by the LICs in implementing an effective TNA process and aims to answer the second research question, namely to identify what problems the companies face in identifying training needs of technical staff. Managers were asked about the main difficulties and challenges that face the TNA process in their companies; findings are set out at 7.2.2.18 and 7.2.3.19, highlighting the difficulties and challenges faced. Participants were given the choice of seventeen common difficulties and were asked to select which is considered a difficult. It was found that "*lack of specialist employees to conduct the TNA*" is considered the greatest challenge for their companies about (58.5%), followed by "*instrumentality and nepotism*" and "*lack of a long-term plan for developing human resource*". The lack of professional staff to conduct TNA may be the main reason for the failure of training activities, and from these findings the impression can be drawn that there is limited awareness of the TNA process, thereby reinforcing the conclusion that there are no specific or systematic practices or procedures for determining training needs in the LICs.

Other difficulties were stated as: "*Some senior managers do not believe in the importance of training*", "*Lack of Participation of heads of workers in the TNA*", "*Lack of motivation among employees*" and "*Lack of precise performance standards for the typical worker achieved lower percentage among participants, showing that they are not considered of great challenge*". However, no answers were provided regarding other difficulties including: "*Absence of job description to compare job requirement*", "*There is no specific body responsible for training*", "*Training objectives are not clear*", "*A lack of standards for application of systems and regulations*", "*Lack of long-term planning for HRD*", "*Employees' recruitment and selection were not in the right place*", "*Employees leave the company after training*", "*The unwillingness of most managers to send their staff for training*", "*Lack of experience of training officials*" and "*Dependence on line managers in the identification of needs*".

The lack of response to the difficulties mentioned does not necessarily mean they do not exist in the selected companies. In fact, some of them have appeared in the answers to interview questions and questionnaires (see 6.3.16 and 6.4.16).

## 8.10. Findings related to proposals improve TNA effectiveness process

As shown in chapter 6 and 7, the selected companies face many challenges and obstacles which are consistent with most other Arab organisations (Agnaia, (1996); Altrawneh, (2005); Alkinani, (2013). This section addresses the fourth objective and outlines what needs to be done to solve and tackle the current problems and challenges of the TNA process.

Interviewees were asked about their viewpoints regarding what needs to be done to tackle problems and challenge to the TNA process and improve their effectiveness (see 6.3.17, 6.4.17, 7.2.2.21 and 7.2.3.20). Overall the participants in this study are responsible for thousands of employees, hence it is important to consider their conclusions and provide solutions to improve planning, delivering and evaluation of training. Their answers and comments revealed that the following issues ought to be taken into consideration:

### 8.10.1. Awareness of the importance of methods of TNA

Training and development should be considered an important investment rather than a cost, and also a continuous process as opposed to stand-alone. In this regard, Lee (1996) emphasises that training should be seen as supporting the business strategy. Therefore, managers should have an awareness of the importance of the TNA process in designing training to meet organisatioal needs and creat a culture that encourages training activities.

### 8.10.2. The need for establishment of independent management for training

In selecting training or committee of training, the majority of participants emphasised the need to establish particular management responsible for training to ensure more attention is given to the TNA, and to design training that is cost and time effective.

LISCO has specific management for training, which is a branch of the General Management of Human Resources, which is a branch of the Administrative and Services Affairs sector. The researcher believes it is important for this company to have a separate department; company size and the number of employees is an important factor in deciding whether the company have separate management for training. Therefore, the researcher suggests a new position of management training that follow the company's management board (see Figure 8.1).

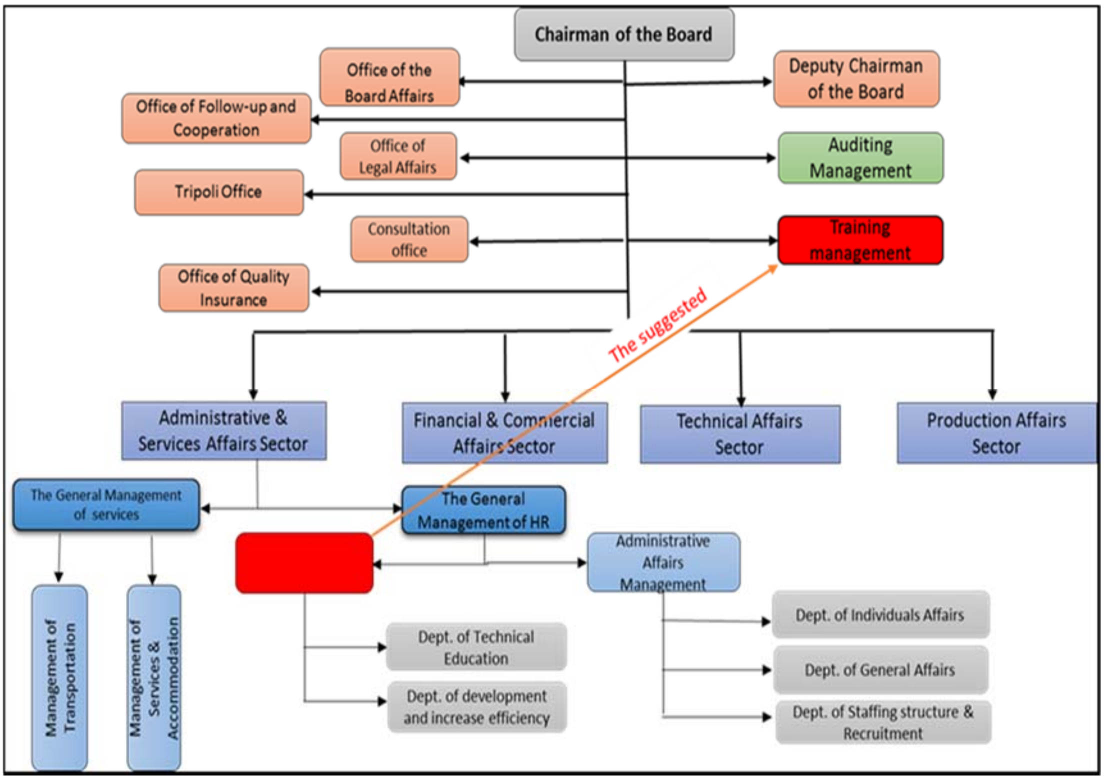


**Figure 8-1: The amended structure for LISCO**

On the other hand, NCC has a specific department of training and it is a branch of the Management of Productive Forces, which is a branch of the General

Management of Administrative & Finance Affairs. The training department will be authorised to set an annual plan dedicated to training, and to cooperate with other departments in doing so.

The researcher believes it is important for this company to have a separate training management department, due to the company size and the number of employees (see Figure: 8.2).

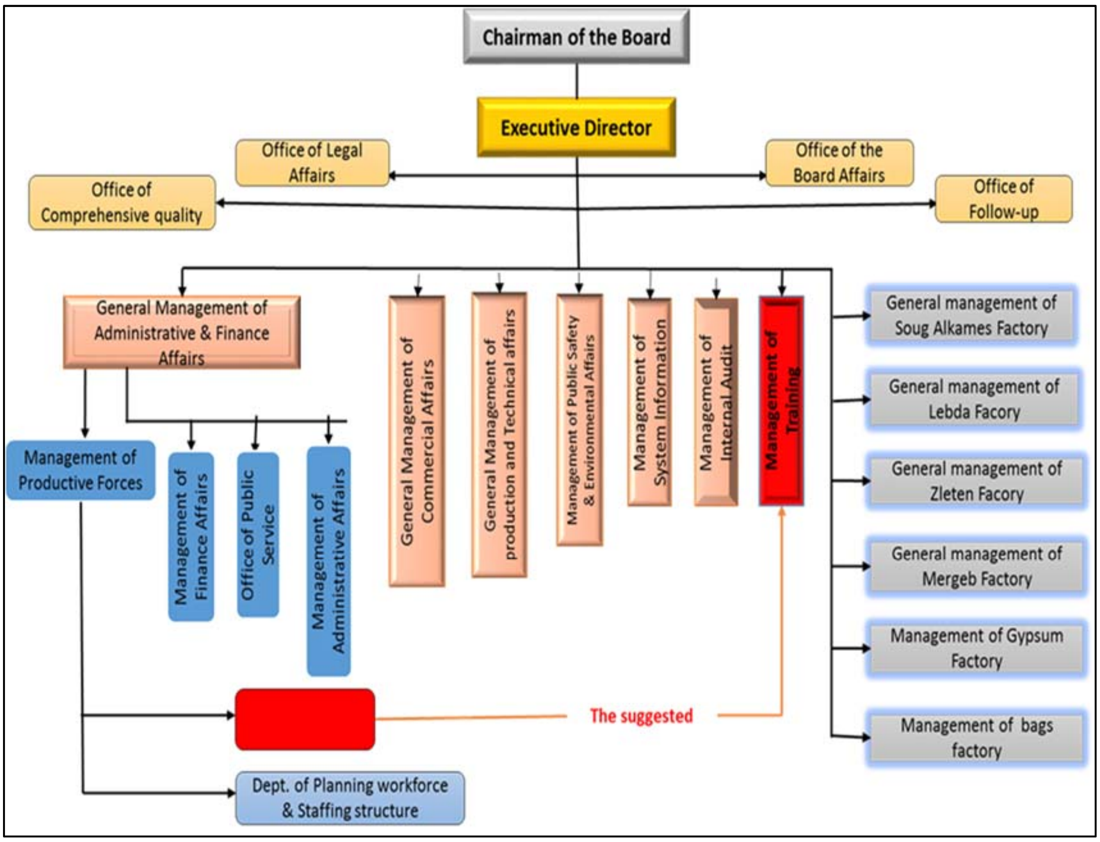


**Figure 8-2: The amended structure for NCC**

### 8.10.3. Adoption of a clear and flexible policy

The training activities should be linked with the organisational strategic plans and policies; training should be allocated a specific budget and a clear and continuous plan. Participants were presented about four statements about the company's efforts towards training (see 7.2.2.8 and 7.2.3.15). Most respondents showed that "*The companies have a specific budget and a clear ongoing plan for training and development"; followed by the statement that "The company have a clearly defined strategy relating to human resource development*".

### 8.10.4. Training of supervisors and to use various methods of TNA

The participants stressed the need for well-qualified, skilled and specialist staff to be knowledgeable about the methods used to identifying training needs and have the ability to conduct effective TNA processes.

When asked to state the difficulties facing training in the company(see 7.2.2.18 and 7.2.3.19), participants stated that the lack of specialised employees to conduct the TNA and also, dependence on line managers in the identification of needs among the difficulties facing companies in the implementation of TNA.

### 8.10.5. Encourage employees to express their needs

Employees should be encouraged to attend training through linking training to their promotions, performance appraisal and incentive rewards. Further, attendance should be compulsory rather than optional because the employees may not be aware of their training needs.

When asked about the discussion between the line managers and subordinates, the participants stated that such discussions between the line managers and the subordinates mainly help prioritise areas that need training. Also, it Helps to identify problems that hinder the efficiency and finally, such discussion allows to develop the skills to express needs (see 7.2.2.14 and 7.2.3.12).

### 8.10.6. The need for systematic TNA process

TNA is an important stage of the training cycle, it should be conducted based on a systematic needs analysis. The participants from the selected companies stressed the importance of adopting a scientific method of TNA such as the three-level analysis discussed previously. Further, there should be an analysis of functional performance reports and a study of technical reports. On the other hand, to overcome most TNA issues, there must be a job description for employees to determine what is required of them. Chapter 9 seeks to address this and presents a framework for improving the practices of the TNA process in the chosen LICs.

### 8.10.7. Line manager's and employees' involvement

Wognum (2000) emphasises the importance of fully involving line managers in any HRD decision-making. Furthermore, Lee (1996) and Harrison (1997) emphasise the need for shared ownership of HRD, where line managers and HRD staff work in partnership over HRD issues.

It is appropriate to conclude this chapter by stating that this study has explored many facts about TNA in LICs and raises many questions that need answering, thus providing direction for future research.

The next chapter sets out a framework to build a TNA model that the researcher believes will assist the LICs to improve their current practices.

# Chapter 9. Development of a Conceptual Model of TNA for LICs

## 9.1. Introduction

This chapter builds on the findings and will present a framework for improving TNA in LICs. The model was designed by using the case study data and is thus, based on each company's specific needs. It is applicable to the training needs of technicians in both companies. It also addresses the validation of the TNA model developed for LICs in Libya. The purpose of the validation process is to identify the reliable stages in the model and to determine whether the model's findings are reliable. Therefore, validation is vital because it reflects the potential objectivity and reliability of the proposed model.

Bimptsos and Petridou (2012:914) stated "*Analysis of training needs constitute the base of a training programme" and "The analysis of training needs is the first important stage of a systematic training procedure*"

TNA plays an important role when identifying individuals in need of training; in the design of training programmes that meet individual and organisational needs, and in determining the skills, knowledge, time and resources required for implementation. Wagonhurst (2002:78) has pointed out the importance of TNA: "Inadequate needs assessment can result in inappropriate and ineffectual interventions which could either have no impact or have a deleterious impact on the actual performance problem". Therefore, the process of identifying training needs must include an analysis of organisational, operational and individual needs.

In order to fully understand the needs of LICs (non-oil), the researcher invited a number of those responsible for the training process to attend a lecture on the development of a conceptual model of TNA for technical staff. The researcher created questionnaire see (A questionnaire form D appendix 6) to investigate the procedures of analysis, techniques, and methods of collecting data and information; the barriers and difficulties involved in identifying needs in their companies, and proposals to increase the effectiveness of the assessment process. The questionnaire was divided into two parts. The first part established some general background information on the participants in charge of formulating and managing T&D, while the second part presented the suggested model for TNA.

## 9.2. Model development

In Chapters 6, 7 and 8 the study's findings were established by analysing questionnaires and interviews. This chapter presents a framework for improving the TNA process in the chosen LICs. The outcomes of the statistical analysis for the questionnaires and interviews are consistent in highlighting several drawbacks of contemporary TNA implementation.

The analyses of the interviews and questionnaires revealed that:

1. The employees' candidacy for training is not linked to performance appraisal because job descriptions do not explain the performance of tasks, and thereby do not reveal the activities that an individual should carry out in performing their duties.
2. There is a lack of appropriate expertise and qualifications to implement the TNA process. Most of the line managers have no skills for analysing training needs. On whether or not they have received any training on how to identify training needs and design training programmes, most participants stated 'no' (60%), compared to those who stated that they have received such training (40%).
3. In the selected companies, it is the employees themselves who complete the training course questionnaires, which determine whether or not they need training. Employees then decide whether or not they want to attend the programme. Employees may not realize how such courses might benefit them, and if this decision is made at their own discretion then they may be unlikely to attend. Their questionnaire answers often refer to their own perceptions of their training needs.
4. There is a dependence upon line managers' perceptions in the nomination for training. Upon asking technicians how they came to be nominated for training, 60% indicated that the head of a department nominated them. Therefore, trainee nomination is mostly subject to supervisors and/or direct managers' opinions, and their nomination decisions will often be informed by their relationships with subordinates, e.g. relatives, friends, or otherwise loyalty-based. Hence, personal considerations often dictate such decisions. Additionally, of the line managers

participating in the questionnaire, about (53%) expressed their dissatisfaction with the TNA process.

5. When considering the three levels (organisational, operational and individual), line managers' responses indicate that their training needs analysis does not involve all three levels. They focus only on individual requirements. According to responses to Question 11 on form B, about 55% stated that they only analyse at the individual level. This is one of key findings in support of the researcher's suggested model, which will be discussed later.
6. The identification of individual training needs is based on direct questioning of employees about their needs for training programmes.
7. Training is provided based on the fulfilment of obligations required by general criteria, such as the International Organisation for Standardization (ISO).
8. The companies do not conduct TNA as part of actions taken to address issues which might contribute towards poor performance.
9. There are no personnel in the companies with appropriate qualifications to analyse training needs and design training programmes. The companies do not design their own training programmes, but instead, select appropriate programmes from lists of annual training plans published by both domestic and foreign training companies and centres.
10. Factors such as social relationships, kinship, friendship, and nepotism influence TNA decisions.
11. There are many obstacles to effective TNA, including, a lack of specialist employees, insufficient experience of those responsible for training, insufficient focus on long-term planning for HRD, and a lack of job descriptions.
12. There is no model available to identify training needs and which displays the types of analysis, methods and techniques that are used to obtain information and statements.
13. There have been no systematic attempts to address the most significant performance problems in, and most of the companies conduct their training without any strategic plan or clear vision.

## 9.3. Discussion: steps for improvement TNA model

There are many steps that can be taken to improve TNA practices. By adopting a TNA model and issuing regulations of training management, the training of managers responsible for conducting TNA can be improved.

It is believed that the lack of comprehensive training (only 10%-15% of all employees receive training) may be a significant reason for the influence of external factors such as social relationships, kinship, friendship and nepotism upon the nomination of staff for training.

Further improvements can be achieved, in the methods and techniques used for TNA, and by linking training objectives with the organisation's strategic plans. Senior management support is a key requirement for TNA success as it enables the collection of information on all staff at the implementation phase of the evaluation process. Without organisational support the accurate and effective completion of the assessment is extremely difficult. It can further be argued employee dissatisfaction and poor morale can be the most significant barrier to a system for identifying training needs.

For successful training programmes, the following three important steps should be carried out:

1. Organisational analysis: this begins by examining the organisation's short and long term objectives, and of the factors which are likely to affect these. Whether economic, political, legal, or organisational, the analyst must examine such issues systematically.
2. Operational analysis: the analyst focuses on job requirements to determine whether there are skills, knowledge or attitudes necessary for the successful completion of those tasks.
3. Analysis of the individual: the analyst evaluates the efficiency of the employee's job performance with attention to their knowledge, skills and attitudes. The requirements for effective job performance are identified, which highlights specific issues in the employee's scope for improvement.

Akhorshaideh (2013) demonstrated that most studies on TNA focused on analysing organisational needs. Only 32% of investigations were focused upon the individual level.

## 9.4. Suggested model

This model consists of four stages, which are explained in detail below.

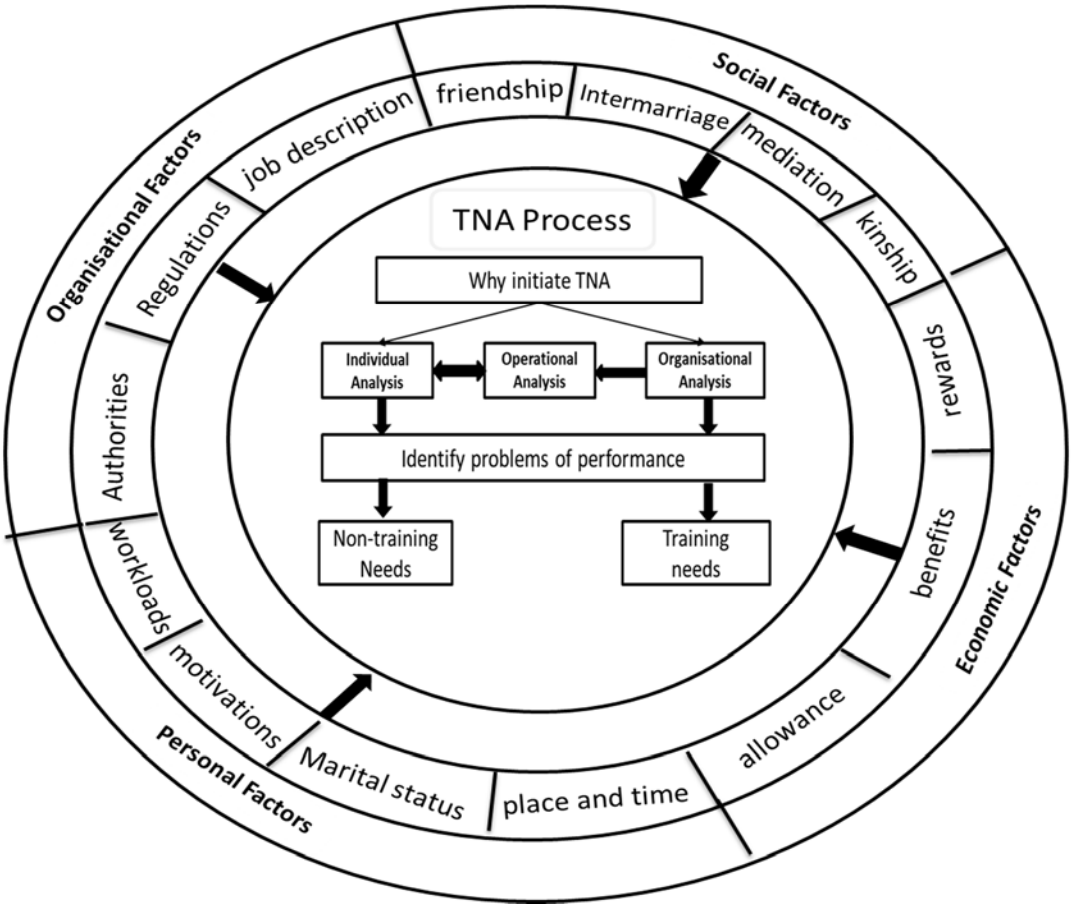


**Figure 9-1: Suggested model of TNA for technical staff in LICs**

(Proposed by the researcher, based on this study's findings)

Figure 9.1 shows the TNA for technicians in industrial companies. This proposed model consists of four main stages which are explained below.

### 9.4.1. First stage: Initiate a TNA

The first phase (trigger event) requires organisations to determine TNA indicators, like skills and knowledge deficiencies. This can be attributed to many factors such as the migration of skilled people, insufficient wages, poor working conditions and political instability, which can create an industry-wide skills and knowledge deficiency. Therefore, TNA must be performed effectively to mitigate skills and knowledge shortages. In the first phase it is necessary to gain senior management support and to identify the areas in need of assessment, and the costs and resources involved in implementing training programmes.

Many factors can inhibit performance, like a lack of knowledge, skills and attitudes (KSAs), poor communications and mismanagement, and selection and recruitment difficulties. Other factors may include wage structure, rewards, bonuses, working environment, high staff turnover rates, the migration of skilled and technical employees (which is particularly salient to this study) and political instability (Jamil, (2006); Alkinani, (2013)).

If employee performance is affected by the lack of KSAs, training will be useful when the specific individuals who lack the necessary KSAs are enrolled on training programmes. According to the definition of training by Blanchard and Thacker (2003:10): "*Training is a systematic process of providing an opportunity to learn knowledge, skills and abilities for current and future jobs*". *Any training not conforming to this will be wasting the organisation's financial resources: "Trying to train employees whose performance problems are not caused by knowledge, skills and abilities deficiencies is therefore, a big mistake*" (Jamil, 2006:5).

Unfortunately, practices in the selected industrial companies show that most issues are addressed with recourse to training without any analysis of the causes of these problems (Jamil, 2006). Therefore, trainee selection should undergo the TNA process to ensure that employees have access to required training.

### 9.4.2. Second stage: Three levels of (O-T-P) analysis

A three-level analysis will reveal performance discrepancies and decide whether it must be addressed. This analysis should be interrelated and built on each other to produce a complete statement of the training needs. This definition of TNA stresses this importance: "*The first step in the training process. Designed to identify performance gaps that can be remedied by training. It consists of surveillance, investigation, and data analysis*." (Tracey, 2004:678). Also, "*it is a methodical investigation and analysis into an organisation's current and desired performance levels, focusing heavily on the ability of its staff and their support network. A TNA will help an organisation to target specific business issues through designing* *bespoke training solutions*." (Denby, 2010:148). The three levels this stage of the TNA model are described below.as follows:

#### 9.4.2.1. Organisational level

This aims to identify where training should be included within a company's administrative units, and also accounts for training objectives, which should be consistent with the company's strategic plan and goals. The determination of training needs should be instigated locally or internationally, and anticipate the knowledge, skills and abilities required in the future. The general aim of organisational analysis is to determine training requirements.

At the organisational level, the company's components are examined, including the identification of goals, training climate, and legal restrictions that affect internal and external training efforts. This is then followed by operational analysis and individual analysis, as detailed below.

#### 9.4.2.2. Operational level

This involves assessing the demands of particular job roles and understanding how they might be improved, enlarged and modified in order to achieve goals. At this level, analysis focuses on understanding the skills and capacities needed to perform particular tasks or jobs because it is imperative to understand the tasks required to perform a particular job, the way it can be performed, and the KSAs required to complete each task.

This analysis can determine differences between existing KSAs competencies and those needed for improved performance. The broad aim of operational analysis is to understand tasks, how they are to be performed, and the requisite knowledge and skills to perform those tasks.

#### 9.4.2.3. Individual level

In this stage the level of performance for each individual is evaluated and compared with job requirements to understand the difference between current performance and required performance, and to identify any skills or knowledge deficiencies. Importantly, analysis should not only focus on employees' current training needs of but also on future skills.

### 9.4.3. Third stage: Collecting and analysing data

In order to design training programmes that meet organisation and individual needs, programmes should analyse three levels (organisational, operational and individual) and should identify appropriate data collection methods for each level (Agnaia, 1996). These methods can be divided into two categories, quantitative and qualitative, according to the types of data they require, including observation, group discussion, interviews, questionnaires, and KSAs tests. Specific techniques are used to analyse training needs at each level. For example, at the organisational level, techniques include organisational scanning (or environmental), balanced scorecard, political, economic, social and technological (PEST) analysis, as well as strengths, weaknesses, opportunities and threat (SWOT) analysis. At the operational level, job and task analysis, competency analysis and skills inventory are used. At the individual level, performance appraisal, diary analysis and critical incident analysis are pertinent.

Technicians may encounter obstacles that may hinder the TNA process. Some major barriers include a lack of expert employees with adequate training experience, non-supportive senior management and an absence of job descriptions. As identified above, line managers and those responsible for training, consider direct observations and employee interviews, as the best data-collection methods for TNA, followed by questionnaires. Questionnaires are popular because of their cost-effectiveness and analytic suitability for large populations. This method is also straightforward and easy to analyse. Following the data collection, TNA is used to identify the specific skills and knowledge that technicians require, and (through analysis and interpretation of data) to design training processes. This stage forms the planning basis for attempts to solve performance problems, whether by training or non-training means.

Data analysis provides a more accurate picture of a company's needs. This stage is the most effective phase; a collaborative process that involves all stakeholders, including senior management, managers, employees and trainers.

There is then a need to compare present data with previously gathered data. This process can provide a valuable insight into any continuing problems in targeted areas. It can also highlight objectives for future investigation and development.

### 9.4.4. Fourth Stage: Identifying the performance problems

TNA can help to identify performance problems and training, or non-training needs required to solve those problems, though Wagonhurst (2002:78) notes "Training is not an appropriate or effective prescription for every performance issue".

Upon determining problems that training can address, training priorities must be established. Six basic factors can be observed in setting priorities for training needs: "impact, scope, organisation policy, time, need type and feasibility" (Olivas, 2007:37). Accordingly, the identifying training needs can ensure that the most important deficiencies are addressed. Training is a priority for accomplishing present organisational, not just future requirements.

A report can be issued at this stage to illustrate the types of performance problems, the problems associated with a shortage in KSAs and the extent of training requirements to solve such problems. At this stage, the report would outline statements on how training decisions relating to the nomination of technical staff to attend training programmes would be made. Senior management must clearly determine a company's training priorities to ensure that training programmes are designed to achieve strategic objectives.

### 9.4.5. Factors affecting identification of training needs

Libya is an Arab society, composed of tribes bound together by social relations such as intermarriage, kinship. Such relationships may have influenced the various aspects of life in Libya and affect individual employment performance.

In this section the impact of factors upon the process of determining training needs of individuals working in LICs will be explained. Four factors affect the process of determining training needs, which derive mostly from practices and traditions of Libyan society;

**1. Organisational factors:**

Through answers questionnaire responses, it became clear that the approach adopted by companies in identifying the training needs of its staff are based on observations and opinions of the supervisors, through daily supervision, follow-up and annual reports. Admittedly, supervisors are not able to accurately determine true needs because they do not know the organisation's objectives. This introduces ambiguity into identifying candidates for training.

Therefore, regulations or protocols are required to shape the processes of identifying training needs and accurate descriptions for jobs and tasks. This prevents line managers' domination of the nomination of their subordinates for training.

**2. Economic factors:**

Financial gains can also be made from training, such as the employees' rewards, especially training abroad. This is important to encourage individuals to perform work effectively. Therefore, individuals compete to perform tasks to get such financial returns. Hence, some individuals may be preferred over others in order to take advantage of financial benefits from training.

From line managers' responses to the question, "What are the barriers hindering effective training needs analysis of trainees?", additional answers were included in the space for "Others" "*that some of the trainees do not want to join training courses which do not give a financial return*". Hence, we can say: as long as financial factors influence the desire to attend the course, the determination of the training needs will be affected. Thus, these individuals provide information to show that they need to attend training for the purpose of benefiting from the financial returns even though these courses are not for the professional benefit. The general lack of motivation among employees is a significant reason for staff to avoid attending courses even though it increases their efficiency.

**3. Social factors:**

Clarke (2003) asserted that ignorance of the nature of social relationships in organisations can influence training-related decisions. It appears that the KSAs of employees in LICs have been largely influenced by socio-cultural factors deriving from Arab culture and Islamic rules. Thus, many steps need to be taken to stress the importance of TNA and to overcome obstacles faced in order to apply the results. One practitioner who participated in the assessment of this model noted that "*socio-political pressures have more impact on industrial management than in the past*".

Another participant pointed out that "Apparently TNA in our company is conducted randomly and unsystematically". The nomination process is subject to personal opinion for line managers and senior managers. The proposed model can also help to avoid “Wasta” and “favouritism”; two social factors that affect T&D at the company when nominating the employees for training programmes.

**4. Personal factors:**

When looking at participants’ responses regarding the difficulties in assessing training needs, one asserted: "*Some employees do not wish to leave their families for an offsite training course and are not serious about training" and “Employees at times do not care about training, and that is a major difficulty, especially if it is far from the workplace*”.

Participants showed that among the difficulties a negative attitude towards training prevails, especially if it is inconvenient. Therefore, employees’ non-participation in courses may explain their attitude towards attending training. Agnaia (1996) confirmed that staff at some companies are trying to persuade their supervisors to send them to training courses, which are unnecessary, but enable employees to obtain a training allowances or escape workloads.

This lack of motivation means that employees attempt to avoid attending some courses even though it improves efficiency. Finances influence the desire to attend courses and affect the TNA process because individuals will provide false information to show that they need to attend training, even though they are merely benefiting from the financial returns. the financial returns.

## 9.5. Development of a conceptual model of TNA

A model for identifying a TNA is presented in Chapter four (Section 10, Figure 4-3). It consists of three levels: organisational analysis, operational analysis and individual analysis. As indicated in Chapter 3, the first model is based on Western literature models; mainly the Blanchard and Thacker model (2003:114), and it also derives from the results of this study, as discussed in Chapter eight and in this chapter.

This model will provide opportunities to improve procedures for the selection and nomination of candidates for training courses. There is general agreement between the three types of participants in the companies (i.e. technicians, line managers and senior managers). Also, this model may also help to avoid the inclination towards “Wasta” favouritism, and social factors that affect TNA processes.

According to the participants’ answers, their companies do not pay attention to all levels of TNA. The analysis procedure aims to determine individual needs, without including organisational or operational levels. The focus and interest of both companies on the individual level indicate insufficient experience and a lack of job description availability.

It should also be noted that both companies do not distinguish between technical skills, professional skills, and behavioural skills (see Chapters 6 and 7). Also, Altarawneh (2005) noted that TNA levels should be based on analysing needs at organisational, operational and individual levels, and not restricted to one level.

Agnaia (1996) reported that the performance appraisals system is one of the major TNA techniques adopted by Libyan companies. Furthermore, Brown (2002) notes that performance evaluations can be useful for TNA.

As mentioned, there is a need to analyse the three levels in the TNA process (organisational, operational and individual analysis), as it can help achieve effective training results in these companies, because it connects training objectives with company goals.

This study is the first to investigate the TNA process in two large Libyan companies and provides a model of TNA in Libyan context, being based on two Western models, namely Blanchard and Thacker's 2003 model and Goldstein and Ford’s 2002 model.Goldstein and Ford’s 2002 model.

## 9.6. Validation of the conceptual TNA model

The validation process aimed to discover whether the concepts and methodologies used in developing the TNA model were reliable. Validation of the model is vital as it reflects objectivity and reliability, and determines it adequacy for the intended purpose of the TNA process. The validation process of the TNA model includes three important stages:

1. The conceptual field: the validation of the model can be recognised through the testability and adaptability of the concepts used in the study.

2. The methodological field: it is likely that the efficiency, accuracy, clarity and lack of bias are available in this stage.
3. The substantive field: it is anticipated that the research should be beneficial or relevant to potential practical applications, and must be validated to ensure that it accurately reflects the characteristics of the study population.
4. It is likely that this model will reflect TNA characteristics in both companies and can be applied to other LICs where the circumstances may be similar. The face validity technique involves asking those officials and the decision-makers with experience in the field, to judge whether this model is reasonable and suitable for implementation. This was achieved through a lecture by the researcher to explain the model and its features. This evaluation process by experts and practitioners in the field of TNA was useful to ascertain whether this model corresponds with the day-to-day operations of an organisation.

### 9.6.1. The feature of this model

The justification for this model comes from increased interest in skills and knowledge development of employees in the industry, and particularly in LICs (non-oil), in order to achieve the required level of effectiveness necessary to remain competitive in the region.

Identification of training needs helps Libyan companies conduct successful training, whereas recognising non-training needs helps focus management decisions on solutions not concerned with training. Therefore, based on a review of the relevant literature and the study's findings, the researcher proposed this model to highlight training needs assessment and the results of training needs analysis.

The suggested model combines three levels to institute an analytic model in order to achieve two things in a single process; the organization-task-person (O-T-P) model, regarding the investigation of training needs to meet organisational needs (task or job needs) through to long term individual needs for future training. Although performance analysis looks at training needs by focusing on performance discrepancy between employees'/ current performance and expected performance, training is then applied as the solution only where performance is not being met. Therefore, the suggested model can link the training needs of employees with organizational strategic objectives. It can also identify future needs and requirements, which promote organizational survival and competitiveness. The researcher believed that this suggested model is comprehensive as it considers the steps in for successful TNA exercise.

In general, all practitioners agreed that this study of TNA for Libyan industrial companies establish a useful model to identify employees' training needs.

## 9.7. External validation

Due to constraints such as time limits, the researcher cannot use independently verify the study, as it is not possible to perform a follow-up. Neither splitting the sample nor re-sampling was used, because there is not sufficient data for this kind of analysis. Stein's equation has not been used because the data collected is insufficient, and does not account for the regression model. Therefore, this study has consulted expert "practitioners" on relevant aspects of the suggested model.

It is anticipated that the research should be beneficial or relevant for any potential practical applications of TNA process. Hence, transferability has to be validated to make sure that the suggested model shows the characteristics of the general population (Ahadzie, 2007). External validation is applied in the substantive domain, as described below.

### 9.7.1. Testing the validity of the suggested model

Six practitioners who are engaged in identifying training needs in the selected companies evaluated the suggested model. They completed a questionnaire to assess whether the model corresponds with reality.

Participants were given detailed information about the study's objectives and the suggested model. The questionnaires were distributed directly after the end of the lecture on 29 December 2014, at the training centre in LISCO, and each participant was requested to evaluate the validity of each item based on an index rating. The questionnaire (D) (see appendix 6) introduced the variables identified in the model's development and asked respondents to assess them on a scale of one to five. Practitioners decided whether the proposed model is useful in practice and whether the information provided by the TNA is credible to ensure effective training (Jamil, 2006).

A five-point Likert ordinal scale was used in part B, where participants were asked to complete the questionnaire, indicating their agreement or disagreement with each statement. The Likert scale used was (1) strongly agree, (2) agree, (3) neutral, (4) disagree, and (5) strongly disagree. The questionnaire involved specific and focused questions to test the proposed model. The TNA model was evaluated by questionnaire, which included seventeen questions divided into two parts. The first part consisted of four questions, with thirteen in the second part. A space was included at the end for further comments about the model and TNA in the company.

### 9.7.2. Results of the questionnaire

Table 9.1 shows the answers provided using a five-point Likert response scale ranging from (1 = strongly agree) to (5 = strongly disagree).

**Table 9-1: Feedback from practitioners with respect to findings (6 Respondents)**

| No. | Questions | Five-point | | | | |
|---|---|---|---|---|---|---|
| | | 5 | 4 | 3 | 2 | 1 |
| 5 | Technical staff prolems | | | | | |
| | Lack of knowledge | | | | 2 | 4 |
| | Lack of skills | | | 1 | 1 | 4 |
| | Poor performance | | | 1 | 3 | 2 |
| 6 | TNA plays an important role in ensuring training effectiveness improvement | | | | 2 | 4 |
| 7 | TNA helps to reduce training cost | | | | 1 | 5 |
| 8 | In order to use qualitative and quantitative data gathering methods effectively, analysts need to possess skills like good communication skills, empathetic listening, interpersonal skills, and the ability to observe objectively and subjectively | | | | | 6 |
| 9 | Organisational analysis helps to locate training in which level, or department or section or professional group. It also studies and analyses organisational objectives, organisational climates and human resources | | | 1 | 1 | 4 |
| 10 | Operational analysis involves a systematic approach to data collection about a specific job or group of jobs, and its purpose is to identify what is required in terms of knowledge, skills and attitudes to perform duties required for a particular function | | | 1 | 2 | 3 |
| 11 | Individual analysis can identify deficiencies (skills, knowledge and attitudes). Therefore, the nature and type of individuals who will participate in training can be known in advance | | | 1 | 1 | 4 |

| No. | Questions | Five-point | | | | |
|---|---|---|---|---|---|---|
| | | 5 | 4 | 3 | 2 | 1 |
| 12 | Use these techniques in conducting TNA at the organisational level | | | | | |
| | Organisational scanning (or environmental) | | | 2 | 4 | |
| | Balanced scorecard | | | 2 | 4 | |
| | Political, economic, social, technological (PEST) analysis | | | 2 | 4 | |
| | Strengths, weaknesses, opportunities and threats (SWOT) analysis | | | 1 | 5 | |
| 13 | Use these techniques in conducting TNA at the operational level | | | | | |
| | Job analysis | | | 1 | 4 | 1 |
| | Task analysis | | | 1 | 4 | 1 |
| | Competency analysis | | 1 | 1 | 3 | 1 |
| | Skills inventory | | 1 | 2 | 3 | |
| 14 | Use these techniques in conducting TNA at the individual level | | | | | |
| | Performance appraisal | | | | 6 | |
| | Critical incident analysis | | | 1 | 4 | 1 |
| | Diary analysis | | | 1 | 4 | 1 |
| 15 | The methods used in collecting statements and information to determine TNA | | | | | |
| | Observation | | | | 5 | 1 |
| | Group discussion | | | 1 | 5 | |
| | Interviews | | | 2 | 4 | |
| | Questionnaires | | | | 5 | 1 |
| | Skills, knowledge and abilities (SKAs) tests | | | 1 | 4 | 1 |
| 16 | The barriers facing the conducting of TNA | | | | | |
| | Lack of job descriptions | | | 1 | 3 | 2 |
| | Lack of adequate expertise | | 1 | 2 | 2 | 1 |
| | Training objectives are not clear | | | | 2 | 4 |
| | The unwillingness of most managers to send their staff for training | | 1 | 3 | 1 | 1 |
| | Lack of precise performance standards for the typical worker | | | 1 | 2 | 3 |
| | Lack of support from top management | | 2 | 3 | 1 | |
| | Lack of funding resources | | 2 | 3 | 1 | |
| 17 | The proposed model will help to identify the gap between the current performance level and the performance required | | | | 3 | 3 |

More than 90% of respondents agreed or strongly agreed.

- From the results to question (5) about the problem areas for technicians, the answers indicate that a lack of skills, a lack of knowledge and poor performance are necessary causes introducing training programmes.
- Table 9.1 shows that all participants agreed that TNA plays an important role in ensuring training effectiveness and helps to reduce the cost of training programmes. This table also shows that the practitioners in the selected companies all strongly agree that analysts need good communication skills, which includes listening to subordinates, interpersonal skills, and the ability to make objective and subjective observations.
- Examining the results to questions (9), (10) and (11) on the levels of analysis, 66% of participants strongly agree on the individual level and 22% agree that there must be attention to all TNA levels - that is, the organisational, operational and individual levels. In this context, a participant stated: "*Regrettably, the company pays attention only to the individual level in preparing the training programmes for their employees. In order to achieve successful and effective results from those training programmes they should analyse the three levels*". These answers, and this comment emphasize the need for this model.
- Question (12) examined respondents' opinions on TNA techniques adopted by industrial companies at each of the three levels. The organisational level includes strengths, weaknesses, opportunities and threats (SWOT) analysis, organisational scanning (or environmental), balanced scorecard and political, economic, social, and technological (PEST) analysis.
- Question (13) asked respondents about the techniques deployed at the operational level: job analysis, task analysis, and competency analysis and skills inventory. Most respondents stated that it is appropriate to use these techniques to analyse the organisational and operational levels, even though questionnaire results showed that those companies in Libya did not consider analysis of the three levels of TNA when preparing training programmes (see chapter 6 and 7). This influences the researcher's suggested model.
- Question (14) looked at the techniques used in conducting TNA on an individual basis. 77% agreed that performance appraisal appeared to be the best method while about 11% strongly agreed with adding the critical incident and diary

analysis methods. One participant stated: “A review of the employees’ current performance should be done based on their annual performance reports to determine their levels of skill, knowledge and abilities”.

- The practitioners were asked about the methods used to get the data and information for TNA, namely observation, questionnaires, group discussion, KSAs tests, and interviews.

One comment suggested, “*traditional methods, e.g. questionnaire, interviews, and assessment centres may be time consuming and impractical. This problem can be reduced by use of the observations and tests of skills, knowledge and abilities*”.

All practitioners agreed that training objectives are not clear. Employees do not have performance benchmarks, and most managers are unwilling to send staff for training. Thus, senior managers should assist in determining training objectives and connecting these with the company’s performance standards. One respondent disagreed, and said that “*(a) lack of adequate expertise is the most common problem facing my company and it could be the same for the rest of the industrial companies*”.

Participants were asked to answer questions about the proposed model, and if it helps their work, to identify the gap between the current performance and the desired level of performance. 100% of respondents agreed, which also validates the application of the suggested model. From the comments, one the participants wrote: “*This model is suitable for the development the programmes of training needs for technical staff and also to guide senior managers*”, while another stated that: “*This model will help industrial companies to have a foundation to identify shortages of skills and knowledge that exist and identify the training needs of their staff*”.

Respondents were asked if they had any further comments about the suggested model. One wrote “*This framework can be applied by my company to facilitate identifying the procedures for determining their employees' training needs”.* Another practitioner pointed out that “*Apparently TNA in our company is conducted randomly and unsystematically; it is subject to personal consideration, relationships and friendships with direct managers and top managers. Family power and nepotism are the main challenges that could face industrial companies when conducting the TNA process*”. The proposed model might also help to avoid “Wasta” and "favouritism", two social factors that affect the nominating of employees for training programmes.

## 9.8. Implications of the suggested model

The success of training programmes requires a three-level analysis and assessment of training needs for technicians; e.g. knowledge, skills and abilities. The following is proposed:

1. The companies will understand the business requirements to provide a favourable environment for training and increased support for training activities, so that all personnel who need training will be trained.
2. Results show that the most important indicators for assessing training needs include insufficient skills and knowledge and poor performance. Any training plan must include methods to anticipate requirements.
3. There are many difficulties in identifying the companies' needs, including a lack of specialist employees and an absence training requirements. Particular attention must be paid to establishing specialist management for T&D, rather than relying upon a section in the management of administrative affairs. Once established, such management could be supported by qualified technical staff members who are capable of identifying training or non-training needs.
4. Paying attention to training incentives, whether financial or non-financial, can encourage employees interested in training to express their training needs, as can linking those incentives to any positive change in the individual's performance.
5. Financial implications should be incorporated into the company's training budget. This financial resource should be considered an investment.
6. The results of this study indicate that line managers nominate training courses. Hence, companies do not analyse the organisational and operational levels, and do not link the training aims to company aims. Practitioners indicate the best methods for assessing training needs, which helps them identify knowledge, skills and abilities deficiencies. Strengths and weaknesses are examined with regard to skills, identify training needs for employees.
7. Social factors which affect the nominations for training i.e relationships, kinship, personal desires and nepotism, should be avoided. Line managers who select and nominate subordinates for training should be less empowered in this role. The fact

that some managers do not believe in the importance of training and the unwillingness of most managers to send their staff for training requires the implementation of policies and procedures governing the process of conducting a TNA, including regulations outlining training and job descriptions in those companies.

8. Establishing information databases and the use of management information systems can help to identify needs and inform different types of management decisions related to training.
9. Finally, even though industrial companies are advised to apply the model mentioned above, the researcher acknowledges the necessity for further study on this model in order to measure its effectiveness in identifying training needs, problems and difficulties that may arise.

The implementation of this model in LICs may face obstacles because Libya has a poor infrastructure, where many essential and non-essential aspects of living have been neglected since 2011, through to the current civil war.

This study received answers from those who are actually working in the iron, steel and cement industries, to explain and understand the TNA process as it is practised in industrial companies; through those officials for T&D in these industries. The study revealed there are gaps in the first stage in the training cycle, namely TNA, which has a significant influence on the effectiveness of the TNA process. For this reason, this study provides a model for TNA to improve TNAs in industrial companies.

The researcher does not expect precise results from this study in such harsh conditions and instability. It is believed that the findings of this study might face an uphill struggle trying to get accepted and then adopted by the iron, steel, cement and other industries. There are strong and powerful indicators of economic recovery in Libya that make this study relevant to economic improvement. The results of the validation of this suggested model can give some assurance that the model in this study is in congruent with reality in the Libyan context.

It is likely that this model may reflect the characteristics of TNA in LICs and is applicable to other developing countries, particularly Arabic countries where circumstances might be similar to those in Libya.

The following final chapter will present this study's conclusions, limitations, contributions to knowledge, and recommendations for improvements to the TNA process in the Libyan industrial sector, specifically in the LISCO and NCC.

# Chapter 10. Conclusions

## 10.1. Introduction

This study was undertaken to investigate current TNA practices in LICs, focusing on two large companies in order to produce a case study.

To obtain quality research findings the most appropriate methodology to achieve the research objectives and answer the research questions is necessary. Similar and previous authoritative research has employed a qualitative and quantitative methodology within a phenomenological theoretical and analytical framework for this purpose. The case study methodology facilitates the combination of different data collection methods, whether qualitative and/or quantitative, in order to describe and explore statements that explain phenomena. As this study's key objectives aim to describe TNA practices, the researcher used two data collection methods: qualitative data obtained from interviews with line managers and senior managers, and quantitative data obtained from three types of questionnaires which were distributed to technicians, line managers and those responsible for training. A mixed method approach is justified and appropriate for this study because in Arab countries, people prefer to talk, rather than to complete a questionnaire (Altarawneh, (2005); Fazani (2013). LISCO and NCC are the two big industrial companies selected from 88 large manufacturing companies (non-oil) in Libya, and which represent LICs. Both companies' headquarters are nearby and accessible to the researcher at his base location, and this enhanced the researcher's ability to successfully conduct the study and to adapt to any unexpected developments.

This study is not concerned with developing or building theory. The key objective is to study a contemporary phenomenon (TNA practices) within a real-life context (LICs), and to measure frequency (survey).

The impact of this research is expected to be significant since, according to the researcher's knowledge, it is the first of its kind and therefore will contribute to improvements in the application of TNA in LICs. Research is essential for understanding current TNA practices in LICs, and to explore the ways in which the training needs of technical staff are assessed. This study investigates current TNA practices in LICs and its findings reveal a number of potentially positive points that may contribute to TNA process improvements, including:

1. There is a need for continuous training for all individuals involved in procedures to identify training needs.
2. A flexible and adequate strategic training activity plan should be devised, which links training objectives with the organisation's strategic objectives.
3. Systematic data collection methods and appropriate analysis techniques should be followed in the three-level analysis of the organisational, the operational, and the individual.
4. This research, along with other studies, will make an essential contribution to addressing an important gap in knowledge.

This study develops a model of TNA to meet the needs of industrial companies, and help to assess their training needs (see Chapter 9).

Finally, in this chapter the researcher considers the implications of the case study’s findings for the selected LICs. This chapter concludes the thesis by summarizing the study’s main conclusions, and also makes some recommendations. It outlines the implications of the study’s results for TNA processes and provides suggestions for future research related to TNA.

## 10.2. Review of the study objectives

The main research questions (see Chapter 1.1.4) were addressed adequately, thus achieving the aim and objectives of the study. The overall aim of this research was to investigate TNA within practices currently being implemented in the selected LICs. This aim has been accomplished effectively by fulfilling the following research objectives:

### 10.2.1. Objective one:

***“To review the relevant literature on TNA in order to develop a theoretical framework”***

To achieve this objective, the relevant literature on TNA was reviewed in Chapter 3. For example, Section 3.5. Identifying Training Needs; TNA theoretical framework Section 3.6; Definitions of TNA Section 3.6.1; Needs Assessment and

Needs Analysis Section 3.6.2; The Processes of TNA and Its Design Section 3.6.3; Role of TNA and Training Effectiveness Section 3.8; Different TNA Models Section 3.10; Sources of Data to Identify Needs Section 3.11; Techniques Used in Conducting TNA Section 3.12. The literature review provided an important insight as to the views and perceptions of TNA, as well as related topics. The literature review helped the researcher to understand TNA theories and, subsequently, prepare three questionnaires and a semi-structured interview protocol.

### 10.2.2. Objective two:

***"To provide a deeper and wider description of current practice in TNA"***

To meet this objective, data was collected from the selected case study companies through questionnaires and interviews in order to identify the levels of TNA and data collection methods and techniques used by each company. By analysing semi-structured interviews using thematic analysis, which allows the researcher to extract themes or ideas from a text, such themes are then linked with the research questions and main objectives (Chapter 6). Additionally, SPSS was used to analyse statements from questionnaires in order to meet this objective (Chapter 7).

Results suggest that TNA in LICs is usually an annual event. The main driver for conducting TNA derives from operational performance requirements. This study provides an alternative perspective on TNA processes mainly due to the discovery that both LICs do not implement TNA in a comprehensive manner. The companies carry out TNA processes only on the individual level, while neglecting the organisational and operational levels. Hence, T&D practices and programmes in the selected companies were examined, which enabled the second objective to be achieved.

### 10.2.3. Objective three:

***"To explore and identify the key factors affecting TNA in LICs"***

One of the main barriers to TNA in the selected companies is the inadequate expertise of the managers responsible for training activities, as well as a lack of employee interest in development. Other studies have highlighted this lack of awareness of the importance of TNA (Atoki, (2013); Alkinani, (2013); Graisa, and

Al-Habaibeh, (2011); Abdulsalam, (2011); Elfazani, (2011); Jamil, (2006); Altarawneh, (2005); Bu Qefel, (1998); Agnaia, (1996).

The identification of training needs by interpreting performance reports does not always reveal the actual needs of a company's employees, because they may be unclear, or may be affected by family, kinship and friendship ties. Therefore, the suggested three-level analysis model and linking of training objectives with the companies' strategic goals may help limit the impact that these social factors have on the nomination of employees for training courses.

### 10.2.4. Objective four:

***"To provide recommendations that will help decision makers to devise more effective training programmes"***

To achieve this objective, the results from the questionnaires and interviews, as well as the findings detailed Chapters 6 and 7 were proposed as practical suggestions in Chapter 9. Broader implications and recommendations are also highlighted in this chapter.

### 10.2.5. Objective five:

***"To develop a model that might be used by LIC as a guideline for TNA programmes"***

The models of TNA identified the three-level analysis, which was integrated into the second stage of the suggested model (see Chapter 9). The researcher explained the suggested model and its features in a lecture on 29 December 2014. The TNA practitioners' questionnaire responses also contributed to this. The evaluation process by experts and practitioners in the field of TNA was useful to ascertain whether this model is suitable for actual usage in an organisation. All the experts agreed that this TNA model provided a framework to accurately assess employees' training needs, which emphasises the importance of planning processes for training in companies. This model will offer industrial companies a tool to identify shortages of KSA and efficiently identify their employees' training needs.

## 10.3. Suggested model for TNA

The aim of the study was to understand the methods of identifying training needs through existing TNA practices used in LICs. It subsequently aimed to propose a theoretical model of TNA suitable to the Libyan context, which is informed by relevant literature, particularly Western literature, as well as the study's findings analysed and discussed in Chapters 6, 7 and 8. This model is an important new contribution to existing TNA knowledge.

In this study, two models from the literature form the basis for developing the new model for TNA in a Libyan context. The model includes other factors that affect how TNA is identified (see figure 9.1), which supports a holistic approach to TNA requiring analysis at three levels: organisational, operational, and individual.

Moreover, in this study the proposed TNA model for LICs is divided into four stages: initiate, three-level analysis, data collection, and identifying performance problems. Chapter 9 provided a detailed discussion on the model process proposed in this research project.

The reason for adopting this new model is that it accounts for the key elements of importance from this study. The case study companies can adopt the proposed model, in order to improve the process of nominating staff who require training.

In this study, an evaluation of the proposed model was conducted to determine training needs of technician staff. Ten TNA experts participated in the evaluation of the model and provided feedback. The researcher gave a presentation to explain the model and its features and after that asked them to complete a questionnaire, followed by open discussions to obtain further feedback and suggestions from all participants.

The questionnaire first introduced the variables identified in the development of the model and asked respondents to assess them on a scale of one to five, i.e. 1-strongly agree, 2-agree, 3-neutral, 4-disagree, 5-strongly disagree. Participants' feedback was used to assess this model's suitability and to acquire their suggestions for adopting or improving the model.

## 10.4. Limitations of the research

Every research study faces some limitations that constrain the researcher. This study is not an exception. Such limitations were taken into consideration and did not harmfully affect the study's results. It is also important for researchers to take these into account when designing future studies. Some of the limitations of this study are as follows:

- There was a lack of literature on TNA in Libya and other Arab countries. Thus, there were no prior established scales and measurements that could have been adapted for a cause-and-effect analysis to identify potential improvements in training and organisational performance. Therefore, this study was not designed to establish a cause-and-effect relationship between TNA process and training programme success, as this is difficult to do.
- This study was carried out in two LIC companies, namely LISCO and NCC. Other economic sectors were excluded due to the specified objectives of this study. Also, only some of the selected companies' employees were involved. The study focused on technical staff and omitted other groups of employees like administrative staff, due to limited time and resources available.
- Most participants who were selected for the study hold executive responsibility for the TNA process in their companies. The aim was to obtain comprehensive and accurate information about their personal knowledge and experience of TNA. However, they are expressing personal views, which may not represent perceptions of senior management or other employees.
- Translating accurately between English and Arabic is not an easy task. Arabic and English are both very rich languages and each word can have many meanings. The researcher made substantial efforts in translating questionnaires and interview questions from English to Arabic. However, with help from experts in English (a Legal translator) and discussion with the supervisory team, an acceptable translation was possible.

## 10.5. Contributions to knowledge

This is the first study conducted to identify training needs in Libya through proposing a conceptual model for TNA processes to identify staff training needs. This study contributed to improving conceptual and theoretical knowledge in the area of training needs analysis in Libya, and to address the existing gap in knowledge on TNA.

Previous studies have relied on examining less effective training programmes to attempt to fill the skills gap at the three levels which prevail in most Arab countries, including Libya. This deficit directly affects the competitiveness of LICs and the global market. In order for this study to address these needs, it may be meaningful to identify the most important KSAs required by technicians in the LICs.

This study will make a significant contribution to this topic. It is the first study of its kind to identify technical staff training needs in Libya by applying an improved model. It is hoped that this will improve upon more widespread methods and practices of TNA and management practices in LICs, and enrich the literature on TNA both in Arab countries and elsewhere. This can help ensure implementation of the first stage of the training cycle in the selected companies and make sure that such implementation is appropriate to the companies' requirements.

This study also contributes to increasing understanding of how TNA decisions are made in the Libyan public sector by relating them to how such decisions are made in developed countries, despite Libya's prevalent social problems like favouritism, kinship, social relationships and "Wasta". These all seem to stifle the ability to effectively nominate technician employees for training, whether domestically or abroad.

The most important contribution of this study is to advance the currently deficient theoretical knowledge in the field of TNA in the Libyan context, by proposing a new model for identifying training needs. This study has made important contributions to knowledge in three areas as follows:

### 10.5.1. Academic contributions

This study that it actually is the first of its kind in Libya, which proposed a model for TNA. Moreover, it is also the first empirical study to examine TNA and aims to bridge the division between theoretical constructs and practical evidence of a TNA with regards to LICs. This study may contribute towards grounded theory building in relation to TNA for technicians in the industrial field.

This study has laid the groundwork for addressing problems associated with identifying KSAs in LICs. Therefore, it is strongly recommended that further empirical work is conducted to expand our knowledge on this subject.

### 10.5.2. Practical contributions

It can be argued that this study has offered a useful framework to explain the importance of TNA in enhancing the quality of training programmes in LICs.

Accordingly, it has provided an assessment of TNA methods of data collection, and techniques for analysis of the three levels (see Figure 10-1: Model of TNA for technical staff in LICs). Practitioners can gain a better understanding of TNA to help them in developing an effective approach to changing current practices that inhibit the quality of training programmes in companies; a problem which was also observed by Iqbal et al. (2011).

This study can help managers at all levels to understand how they can better manage their TNA process, what they need to focus on and to identify any actions required to increase the effectiveness of training programmes.

### 10.5.3. Managerial contribution

The model suggested (Fig. 9-1) can help managers and practitioners to better understand the TNA stages, and what they need to focus on in order to improve the training effectiveness activities. From the results of this study, in order to improve TNA processes in LICs and other similar countries, managers should consider all points outlined in Section 9.2, as well as the following:

- Training needs analysis processes need to be systematised. Training needs should be identified and analysed by using objective and scientific techniques.
- Employees should be nominated for training programmes on the basis of needing training rather than for social and/or cultural reasons, where training is considered as a gift, or disciplinary technique, or for a holiday and rest.
- The training reward system must be enhanced because it can influence candidates' perceptions of training programmes and their decisions on whether or not to participate.

- Training those responsible for training and practitioners to use various methods of TNA, rather than reproducing supervisors' approaches.

## 10.6. Conclusion

This study This study presents an integrated model for TNA, to effectively assist LICs in their need for knowledge, skills and abilities. This model comprises four main stages. These were devised in accordance with the data and information discussed in Chapter 3, and the results presented in Chapters 7 and 8, generated from questionnaires distributed to technicians, line managers and middle managers, as well as the semi-structured interviews with line managers and those responsible for training in the selected companies.

The aim of this study was to develop a model that would help to identify training needs in LICs. The study identified a need for a model to assess knowledge, skills and abilities, which would then help improve performance of training activities through the provision of training to deserving employees and to design training programmes consistent with the organisation's strategic objectives.

Based on the qualitative and quantitative data analyses as presented in Chapter 6 and 7 and discussed in Chapter 8, the following is a summary of the main findings:

1. The employee's candidacy for training is not linked to performance appraisal, because job descriptions do not explain the performance of tasks, and therefore, do not reveal the processes to be undertaken by an individual to adequately perform their duties.
2. There is a general lack of expertise and qualifications to carry out the process for TNA in LICs.
3. There is a dependence on the views of line managers in the nomination of individuals for training. Also, in the Libyan context (see Chapter 2), social factors affect the nomination of subordinates due to their relationships with managers e.g. relatives, friends, intermarriage and kinship or organisational loyalty.
4. There is a lack of analysis across all three levels (organisational, operational and individual) when assessing training needs. TNA processes general focus upon the

individual level, and are usually evaluated by direct questioning about an individual's needs for training programmes.

5. Training is provided based on the fulfilment of obligations required by general criteria, such as the International Standardization for Organisation (ISO).
6. These companies do not carry out any analysis of training needs in order to determine the underlying causes of poor performance.
7. These companies do not design training programmes but instead adopt programmes from lists of annual training plans published by centres and training companies, both domestic and internationally.
8. The TNA process faces many difficulties and challenges including a lack of specialist employees, a lack of experience in those responsible for training, a lack of long-term planning for HRD, and a lack of appropriate job descriptions.
9. There is not appropriate model employed to identify training needs, nor any articulation of the types of analysis, methods and techniques used to obtain information and produce expertise or enable decision-making in this area.

## 10.7. Recommendations

Based Based on the results of this study, the following recommendations are proposed:

1. A TNA should be based on objective systematic techniques. Therefore, analysis of training needs should include organisational, operational and individual levels, rather than deriving from the opinions of line supervisors, responsible managers and employees.
2. A combined use of observations, questionnaires, and interviews with an annual report of performance appraisal when conducting TNA.
3. The use of other important data sources for needs analysis, such as job descriptions. This is important for identifying training needs because job descriptions typically outline the necessary skills, training and education for an employee to perform his work. Trainees will be more likely to take training seriously if they know they will be asked to demonstrate what they have learned after training.

4. It should be acknowledged that training cannot possibly solve all the problems associated with weak performance because other factors can also lead to poor employee performance, such as rewards, motivation and workplaces.
5. Senior management can actively and significantly participate in the TNA process. In particular, their involvement in organisational analysis can help clarify company objectives and future vision with regard to economic, political, social, and other factors that may affect industrial activities.
6. A rigorous analysis carried out at all three levels ensures a more accurate identification of training priorities and ensures that training plans are prepared in accordance with strategic plans.
7. It is advisable to engage consultancy services when conducting a TNA. This may help for adopting external approaches and methods of TNA and to train the managers in areas where they lack expertise. This can also lead to the establishment of departments for needs analysis and other activities.

This study defined the nature and scope of the implementation of TNA in LICs, as well as their commitment to use the methods for collecting data and techniques for analysis at the three stated levels in order to design appropriate training programmes which meet the needs of staff and which are consistent with strategic objectives. This is essential for understanding the difficulties and problems that managers and practitioners face when conducting TNA. TNA can play a supportive role in producing an effective employee team who possess KSA to carry out the work required of them.

Finally, TNA affects a number of other business activities including, setting goals, designing curricula, selection of training bodies, proposing training places, adopting training methods, and evaluating training programmes. Hence, more attention should be afforded to ensure this process succeeds, from the selection of qualified personnel who are responsible for this activity and what activities should be adopted for a more practical approach which accounts for forces within the working and wider social environments.

## 10.8. Directions for future research

By the end of 2011, Libya was under a new and completely different regime. Events at the end 2014, have produced a profound change in the nature of managerial work. This study offers a starting point for subsequent studies and allows comparisons between previous and current environmental circumstances. This will help significantly in assessing the extent of the impact of these changes upon managerial work in general, upon T&D, and in particular upon TNA in practice.

This study has investigated TNA in selected companies from the industrial sector in Libya and has made a significant contribution as the first attempt at empirically exploring the nature of TNA processes in practice. It also identifies the main problems that TNA activities are presented with. However, this study remains tentative until it can be confirmed by similar studies using research methodologies which account for the limitations of this study. This would provide a more complete picture of the appropriate approach to the Libyan context which would contribute to producing more successful training programmes. Accordingly, many questions ought to be addressed in future studies. Some recommendations for consideration in future work are summarised below:

1. To use the same questionnaires and interviews techniques as those used in this study. The use of the same techniques would, therefore, validate and rationalise this data and demonstrate if the majority of respondents continue to agree with the issue.
2. Increasing the companies in industrial sector it up to 66 companies in the field of manufacturing. Distributing questionnaires to staff in each of these companies is recommended. Therefore, the data returned is likely to highlight if there are particular problems with TNA in any of them.
3. The researcher was of the opinion that problems prevail in existing practices and applications of performance appraisal systems. No major research has yet been carried out to evaluate the effectiveness of the role of performance appraisal on TNA.
4. This research can be replicated in similar organisations in other developing countries, including other Arab countries, in order to enhance knowledge on how sector-specific and cultural influences affect the effectiveness of TNA processes.
5. The researcher recommends further research to study TNA from the perspective of training centres, where training providers should address the following questions:

- Is the direction of the company in training consistent with training in departments, sections and units?
- Is the training process successful in the absence of any accountability analyses? For instance, by identifying the responsibility of each person by name, for implementing each task or step in the training process.
- Do training needs vary in accordance with individual factors like gender, age, experience, and educational background?
- Do the internal and external factors affect the efficacy of training?
- Does the improved performance of technical staff lead to increased performance and improved organisational commitment, lower absenteeism and staff turnover?
- What is the impact of job descriptions in evaluating employee performance in industrial companies?
- Was ISO certification in Libya a positive step in improving T&D activities in certified companies? Are there improvements in the analysis of training needs, and HRD activities?
- When determining the need for training, are industrial sector companies successful in accurately clarifying the cost and yield from training?
- Is there a relationship between TNA and other areas of systematised training such as programme design, planning, implementation and evaluation of training?
- Is it possible for LICs to use the internet in the process and improvement of analysing training needs?
- Is there a relationship between TNA practiced in the LICs and their strategic objectives?
- What are the reasons for the rejection of employees to attend training, or for their dissatisfaction on training programmes?

## 10.9. The implications of this research

The success of training programmes depends on a number of factors, including TNA, so that employees can be identified as being likely to benefit from training, and to determine appropriate places and methods of training. To improve TNA practices and training programmes in the non-oil manufacturing sector, the researcher suggests that senior managers should consider the following points:

- Since training is a central practice for these companies, attention must be paid to the "Training Management" and for them to be supported by qualified human resources.
- Senior management should support employee training, with particular focus on skills and knowledge in accordance with the job description for work assignments, and to provide training for all staff who need it. The nomination process should be free of influence from favouritism, nepotism or "*Wasta*".
- To establish a database which includes all necessary information and data on employees, such as qualification, task requirement, experience and previous training. This would help for identifying employees who need training without relying solely on managers' opinions. The nomination of employees by such an electronic system - sampling for training purposes - may reduce the impact of social factors on the nomination process for training. When adopting a training programme, the candidates on the programme log on to the database to an inventory of staff who meet the required conditions, and then candidates are nominated from that list in accordance with the approved plan in terms of numbers, place of work, and those who need more training.
- The companies must be interested in identifying training needs before designing or accepting any prescribed training programmes. Such training programmes must have specific and clear objectives when formulating training plans, they should be measured and evaluated to ensure their effectiveness.
- In order to ensure appropriate planning of training programmes, attention should be paid to all parties participating in preparing those plans, and the specific training objectives that reflect policies and goals espoused by those companies should be reflected in the programmes.
- To avoid the effects of social, economic and organisational factors on the process of determining individuals' training needs in Libyan industrial companies. This can be achieved by making line managers and those responsible for training apply various regulations and administrative procedures in the selection of individuals for training. Since some employees are reluctant to enrol on training programmes, attention ought to be given to different training incentives in order to encourage individuals to participate in training. It is appropriate to emphasise positive

changes in the employee's performance to them, after they have attended a training programme.

**In the last the Quran says:**

***"…. Allah (God) will not change the condition of a people until they change what is in themselves….".*** Great truth of God

**".......إِنَّ اللَّهَ لَا يُغَيِّرُ مَا بِقَوْمٍ حَتَّى يُغَيِّرُوا مَا بِأَنْفُسِهِمْ......"** صدق الله العظيم

Surat Ar-Ra`d (13), verse 11.

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# APPENDICES

## Appendix 1: Tables of determining the sizes of Samples

Table for determining needed size *S* of a randomly chosen sample from a given finite population of *N* cases such that the sample proportion *p* will be within ± .05 of the population proportion *P* with a 95 percent level of cofidence.[1]

| *N* | *S* | *N* | *S* | *N* | *S* |
|---|---|---|---|---|---|
| 10 | 10 | 220 | 140 | 1,200 | 291 |
| 15 | 14 | 230 | 144 | 1,300 | 297 |
| 20 | 19 | 240 | 148 | 1,400 | 302 |
| 25 | 24 | 250 | 152 | 1,500 | 306 |
| 30 | 28 | 260 | 155 | 1,600 | 310 |
| 35 | 32 | 270 | 159 | 1,700 | 313 |
| 40 | 36 | 280 | 162 | 1,800 | 317 |
| 45 | 40 | 290 | 165 | 1,900 | 320 |
| 50 | 44 | 300 | 169 | 2,000 | 322 |
| 55 | 48 | 320 | 175 | 2,200 | 327 |
| 60 | 52 | 340 | 181 | 2,400 | 331 |
| 65 | 56 | 360 | 186 | 2,600 | 335 |
| 70 | 59 | 380 | 191 | 2,800 | 338 |
| 75 | 63 | 400 | 196 | 3,000 | 341 |
| 80 | 66 | 420 | 201 | 3,500 | 346 |
| 85 | 70 | 440 | 205 | 4,000 | 351 |
| 90 | 73 | 460 | 210 | 4,500 | 354 |
| 95 | 76 | 480 | 214 | 5,000 | 357 |
| 100 | 80 | 500 | 217 | 6,000 | 361 |
| 110 | 86 | 550 | 226 | 7,000 | 364 |
| 120 | 92 | 600 | 234 | 8,000 | 367 |
| 130 | 97 | 650 | 242 | 9,000 | 368 |
| 140 | 103 | 700 | 248 | 10,000 | 370 |
| 150 | 108 | 750 | 254 | 15,000 | 375 |
| 160 | 113 | 800 | 260 | 20,000 | 377 |
| 170 | 118 | 850 | 265 | 30,000 | 379 |
| 180 | 123 | 900 | 269 | 40,000 | 380 |
| 190 | 127 | 950 | 274 | 50,000 | 381 |
| 200 | 132 | 1,000 | 278 | 75,000 | 382 |
| 210 | 136 | 1,100 | 285 | 100,000 | 384 |

Note: *N* is population size; S is sample size

[1] Source: Krejcie, R.V. & Morgan, D.W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, 30, 607-610.

## Appendix 2: Qualitative Data Analysis ; Example of thematic analysis process

Following Braun, and Clarke (2006) thematic analysis process:

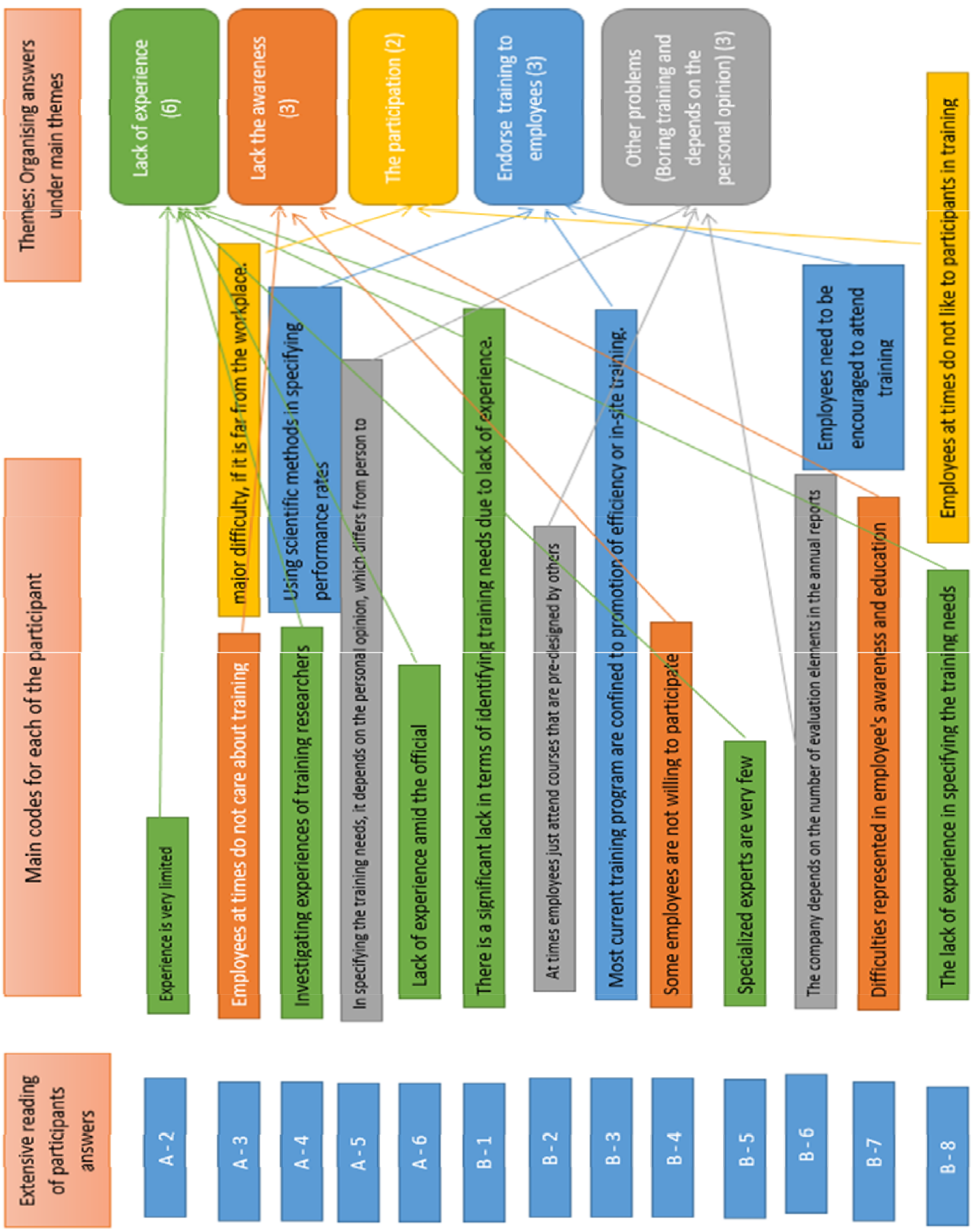
1. Reading and re-reading the text in order to become very familiar with the content: at this stage primary codes or ideas were noted, i.e. generating an initial understanding of what the interviewee reported.
2. Reducing data to the important aspects: at this stage the researcher makes initial codes (comprehensive) of the data while keeping information (text) of how these codes came up.
3. At this phase the researcher combines different codes mentioned from previous phases to ascertain a theme (general code or category).
4. In this phase the researcher determines whether themes are relevant in providing answers to the research questions (supporting the theoretical perspective).
5. Explaining the theme (if needed), in some cases themes can be explicit and straightforward, however at times they could be ambiguous.
6. Reporting the themes that are relevant to the research and provide an understanding to the phenomenon in hand.

These steps aim to sum up extensive text obtained from interview into meaningful themes.

It should be noted that most answers were relevant to the questions asked hence most themes were relevant. The following diagram shows a summary of the analysis process based on a question enquiring about the what difficulties you encounter in identifying training needs?

Difficulties in identifying training needs:

Participants were asked to identify and explain what difficulties they face in identifying training needs. In doing so participants provided different narratives however they all showed similar themes (see 6.3.22 and 6.4.22)


Themes: Organising answers under main themes
Lack of experience (6)
Lack the awareness (3)
The participation (2)
Endorse training to employees (3)
Other problems (Boring training and depends on the personal opinion) (3)
Main codes for each of the participant
Experience is very limited
Employees at times do not care about training
major difficulty, if it is far from the workplace.
Investigating experiences of training researchers
Using scientific methods in specifying performance rates
In specifying the training needs, it depends on the personal opinion, which differs from person to
Lack of experience amid the official
There is a significant lack in terms of identifying training needs due to lack of experience.
At times employees just attend courses that are pre-designed by others
Most current training program are confined to promotion of efficiency or in-site training.
Some employees are not willing to participate
Specialized experts are very few
The company depends on the number of evaluation elements in the annual reports
Employees need to be encouraged to attend training
Difficulties represented in employee's awareness and education
Employees at times do not like to participants in training
The lack of experience in specifying the training needs
Extensive reading of participants answers
A - 2
A - 3
A - 4
A - 5
A - 6
B - 1
B - 2
B - 3
B - 4
B - 5
B - 6
B - 7
B - 8

## Appendix 3: the survey heavy industries by economic activity for the year 2009 by Bureau of Statistics and Census (BSC) in Libya

النتائج الرئيسية لمسح الصناعات الكبيرة حسب النشاط الاقتصادي لعام 2009م (القيمة بالألف دينار)

The Main Outputs of Big Manufacturing Industries by Economic Activity in 2009.C

Table (1 - 1) جدول (1-1)

| ISIC code | Economic activity | التكوين الرأسمالي Total fixed capital formation | القيمة المضافة Gross value added | الاستهلاك الوسيط Intermediate consumption | | | اجمالي قيمة الانتاج Gross output | | | اعداد المشتغلين NO . OF emPloyees | | | عدد المنشآت NO . OF establishments | النشاط الاقتصادي | رمز النشاط |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | المجموع Total | مستلزمات خدمية Services Requisites | مستلزمات سلعية Commodity Requisites | المجموع Total | الانتاج الثانوي Subsidery Prduction | الانتاج الرئيسي Main Production | المجموع Total | غير ليبيين -Non Libyan | ليبيون Libyan | | | |
| 1511 | production processing and breserving of meat and meat broducts | 58 | 10903 | 9410 | 424 | 8986 | 20313 | 0 | 20313 | 1201 | 102 | 1099 | 3 | إعداد وتجهيز اللحوم ومنتجاتها | 1511 |
| 1512 | Processing and Breserving of Fish and Fish Products | 43 | 3592 | 6553 | 341 | 6212 | 10145 | 0 | 10145 | 89 | 1 | 88 | 1 | تجهيز وحفظ وتعليب الأسماك والمنتجات السمكية | 1512 |
| 1513 | processing and breserving of fruit and vegetables | 2778 | 33227 | 46033 | 4304 | 41729 | 79260 | 0 | 79260 | 435 | 39 | 396 | 2 | تجهيز وحفظ وتعليب الفواكه والخضروات | 1513 |
| 1514 | Animal and vegetable oil fast facture | 0 | 12281 | 15374 | 894 | 14480 | 27654 | 3400 | 24255 | 204 | 14 | 190 | 2 | صناعة الزيوت والدهون النباتية والحيوانية | 1514 |
| 1520 | Manufacture of dairy Products | 55 | 41409 | 41964 | 4594 | 37370 | 83373 | 0 | 83373 | 614 | 45 | 569 | 3 | صناعة منتجات الألبان | 1520 |
| 1531 | Manufacture of Grain mill Products | 324 | 192286 | 292896 | 6358 | 286539 | 485183 | 15 | 485168 | 1576 | 89 | 1487 | 9 | صناعة طحن الحبوب | 1531 |
| 1533 | Manufacture of Prepared animal feeds | 115 | 59941 | 75369 | 1962 | 73407 | 135310 | 7785 | 127525 | 504 | 36 | 468 | 6 | صناعة أعلاف حيوانية محضرة | 1533 |
| 1543 | Manufacture of cocoa chocolate and sugar confectionery | 0 | 717 | 803 | 79 | 723 | 1520 | 0 | 1520 | 154 | 38 | 116 | 2 | صناعة الكاكاو والشيكولاته والحلويات السكرية | 1543 |
| 1544 | Manufactuere of Pasta and Kuskis | 0 | 2674 | 2646 | 101 | 2545 | 5320 | 0 | 5320 | 82 | 0 | 82 | 1 | صناعة المكرونة والرشدة والكسكسي والمنتجات النشوية | 1544 |
| 1550 | Manufacture of soft drinks; production of mineral waters | 469 | 5972 | 5266 | 210 | 5056 | 11238 | 3 | 11235 | 343 | 20 | 323 | 3 | صناعة المشروبات غير الكحولية وانتاج المياه المعدنية | 1550 |
| 1600 | Manufacture of tobacco products | 1396 | 20428 | 39139 | 1722 | 37417 | 59567 | 0 | 59567 | 910 | 0 | 910 | 1 | صناعة منتجات التبغ | 1600 |
| 1711 | Preparation and spinning of textile fibres weaving of textiles | 0 | 1428 | 1435 | 28 | 1407 | 2862 | 0 | 2862 | 177 | 5 | 172 | 1 | إعداد وحياكة ألياف المنسوجات ونسجها | 1711 |
| 1721 | Manufacture of made-up textile articles, except apparel | 1 | 5793 | 8729 | 81 | 8648 | 14522 | 0 | 14522 | 204 | 10 | 194 | 2 | صناعة المنسوجات الجاهزة عدا الملابس | 1721 |
| 1722 | Manufacture of carpets and rugs | 0 | 1377 | 2950 | 350 | 2600 | 4327 | 704 | 3623 | 641 | 304 | 337 | 2 | صناعة السجاد والكليم والبسط | 1722 |

النتائج الرئيسية لمسح الصناعات الكبيرة حسب النشاط الاقتصادي لعام 2009م ( القيمة بالالف دينار )

The Main Outputs of Big Manufacturing Industries by Economic Activity in 2009.C

Table ( 1 - 2 ) جدول ( 2 - 1 )

| ISIC code | Economic activity | التكوين الرأسمالي Total fiXed capital formation | القيمة المضافة Gross value added | الاستهلاك الوسيط Intermediate consumption | | | اجمالي قيمة الانتاج Gross output | | | NO اعداد المشتغلين OF emPloyees . | | | عدد المنشآت NO . OF establishments | النشاط الاقتصادي | رمز النشاط |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | المجموع Total | مستلزمات خدمية Services Requisites | مستلزمات سلعية Commodity Requisites | المجموع Total | الانتاج الثانوي Subsidery Prduction | الانتاج الرئيسي Main Production | المجموع Total | غير ليبيين -Non Libyan | ليبيون Libyan | | | |
| 1911 | Tanning and dressing of leather | 29 | 1389 | 768 | 45 | 723 | 2157 | 50 | 2107 | 112 | 0 | 112 | 1 | دباغة الجلود وتهيئتها | 1911 |
| 1920 | Manufacture of Footwear,ExceptRubber and Plastic sandales. | 0 | 781 | 949 | 121 | 828 | 1730 | 268 | 1462 | 160 | 0 | 160 | 1 | صناعة الأحذية والصنادل عدا المطاطية والبلاستيكية | 1920 |
| 2102 | Manufacture of corrugated paper and paperboard and of containers of paper and paperboard | 17 | 6027 | 6440 | 172 | 6268 | 12467 | 0 | 12467 | 99 | 0 | 99 | 1 | صناعة الورق والورق المقوى والأوعية الورقية | 2102 |
| 2109 | Manufacture of Other Articles of Paper and Paperboard. | 0 | 2069 | 1661 | 0 | 1661 | 3730 | 0 | 3730 | 140 | 0 | 140 | 1 | صناعة منتجات أخرى من الورق والورق المقوى | 2109 |
| 2221 | printing | 0 | 812 | 489 | 42 | 447 | 1301 | 0 | 1301 | 130 | 0 | 130 | 2 | الطباعة | 2221 |
| 2320 | Manufacture of refined petroleum products | 1677 | 183626 | 85774 | 15657 | 70117 | 269401 | 47265 | 222136 | 5765 | 262 | 5503 | 2 | صناعة تكرير النفط | 2320 |
| 2411 | Manufacture of basic chemicals, except fertilizers and nitrogen compounds | 1928 | 28102 | 37628 | 5891 | 31737 | 65730 | 1694 | 64036 | 1218 | 140 | 1078 | 2 | صناعة المواد الكيميائية الأساسية | 2411 |
| 2422 | Manufacture of paints, varnishes and similar coatings, printing ink and mastics | 30 | 1508 | 1732 | 208 | 1524 | 3240 | 0 | 3240 | 150 | 7 | 143 | 2 | صناعة الدهانات والورنيش وأحبار الطباعة والمواد اللاصقة | 2422 |
| 2423 | Manufacture of pharmaceuticals, medicinal chemicals and botanical products | 1451 | 13118 | 14854 | 1388 | 13466 | 27972 | 0 | 27972 | 430 | 0 | 430 | 1 | صناعة المستحضرات الصيدلانية والكيماويات الدوائية | 2423 |
| 2424 | Manufacture of soap and detergents, cleaning and polishing preparations, perfumes and toilet preparations | 15 | 3544 | 5028 | 423 | 4605 | 8572 | 24 | 8548 | 225 | 20 | 205 | 2 | صناعة الصابون والمطهرات ومستحضرات التنظيف والتجميل | 2424 |
| 2519 | Manufacture of other rubber products | 1504 | 26464 | 32740 | 612 | 32128 | 59204 | 206 | 58998 | 1624 | 29 | 1595 | 4 | صناعة المنتجات المطاطية الأخرى | 2519 |
| 2520 | Manufacture of plastics products | 0 | 5459 | 5919 | 156 | 5763 | 11378 | 132 | 11246 | 428 | 0 | 428 | 3 | صناعة المنتجات اللدائنية | 2520 |
| 2693 | Manufacture of structural non-refractory clay and ceramic products | 0 | 5993 | 3931 | 267 | 3664 | 9924 | 0 | 9924 | 258 | 86 | 172 | 2 | صناعة المنتجات الطفلية الإنشائية غير الحرارية | 2693 |
| 2694 | Manufacture of cement, lime and plaster | 782460 | 314355 | 227941 | 57947 | 169994 | 542296 | 5289 | 537007 | 5204 | 277 | 4927 | 6 | صناعة الأسمنت والجير والجص | 2694 |
| 2695 | Manufacture of articles of concrete, cement and plaster | 65 | 321 | 268 | 4 | 264 | 589 | 0 | 589 | 68 | 38 | 30 | 1 | صناعة أصناف منتجة من الأسمنت والزلط والجص | 2695 |

النتائج الرئيسية لمسح الصناعات الكبيرة حسب النشاط الاقتصادي لعام 2009م (القيمة بالاف دينار)

The Main Outputs of Big Manufacturing Industries by Economic Activity in 2009.C

Table ( 1 - 3 ) | جدول ( 3 - 1 )

| ISIC code | Economic activity | التكوين الرأسمالي Total fiXed capital formation | القيمة المضافة Gross value added | الاستهلاك الوسيط Intermediate consumption | | | اجمالي قيمة الانتاج Gross output | | | اعداد المشتغلين NO . OF emPloyees | | | عدد المنشآت NO . OF establishments | النشاط الاقتصادي | رمز النشاط |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | المجموع Total | مستلزمات خدمية Services Requisites | مستلزمات سلعية Commodity Requisites | المجموع Total | الانتاج الثانوي Subsidery Prduction | الانتاج الرئيسي Main Production | المجموع Total | غير ليبيين -Non Libyan | ليبيون Libyan | | | |
| 2710 | Manufacture of basic iron and steel | 135694 | 577479 | 658356 | 50602 | 607754 | 1235835 | 28726 | 1207109 | 6567 | 120 | 6447 | 3 | صناعة الحديد والصلب الأساسية | 2710 |
| 2811 | Manufacture of electric lamps and lighting equipment | 3022 | 11307 | 14883 | 514 | 14369 | 26190 | 417 | 25773 | 415 | 4 | 411 | 1 | صناعة المصابيح الكهربائية ومعدات الأنارة | 2811 |
| 2891 | Forming of Metalsby Pressing ,casting and roll mills | 103 | 545 | 403 | 0 | 403 | 948 | 0 | 948 | 59 | 41 | 18 | 1 | تشكيل المعادن بالطرق والكبس والسبك والدلفنة | 2891 |
| 2921 | Manufacture of agricultural and forestry machinery | -62 | 5062 | 5090 | 169 | 4921 | 10153 | 237 | 9916 | 154 | 0 | 154 | 1 | صناعة الألات المستخدمة في الزراعة والغابات | 2921 |
| 2930 | Manufacture of domestic appliances n.e.c. | 0 | 377 | 474 | 35 | 440 | 851 | 29 | 823 | 77 | 0 | 77 | 1 | صناعة الأجهزة المنزلية غير المصنفة | 2930 |
| 3130 | Manufacture of insulated wire and cable | 225 | 25871 | 25244 | 1074 | 24170 | 51116 | 0 | 51116 | 929 | 11 | 918 | 2 | صناعة الأسلاك والكابلات المعزولة | 3130 |
| 3230 | Manufacture of Audio-visual recievers. | 143 | 16337 | 18344 | 183 | 18161 | 34681 | 0 | 34681 | 2412 | 6 | 2406 | 2 | صناعة أجهزة الاستقبال المرئي والمسموع | 3230 |
| 3410 | Manufacture of bodies(coachwork) for | 0 | 78839 | 105367 | 3152 | 102214 | 184206 | 1946 | 182259 | 845 | 0 | 845 | 1 | صناعة المركبات ذات المحركات | 3410 |
| 3420 | motor vehicles, manufacture of trailers and semi - traiers | 216 | 10798 | 9985 | 744 | 9241 | 20783 | 291 | 20491 | 300 | 3 | 297 | 1 | صناعة المركبات المقطورة والمركبات نصف المقطورة | 3420 |
| 3511 | Ship Building and Repairing | 0 | 1352 | 1161 | 231 | 930 | 2513 | 713 | 1800 | 222 | 0 | 222 | 1 | بناء وإصلاح السفن | 3511 |
| 3610 | Manufacture of Furnatur Except and Paint. | 2 | 3358 | 3754 | 329 | 3425 | 7112 | 245 | 6866 | 384 | 27 | 357 | 5 | صناعة الاثاث عدا التنجيد والطلاء | 3610 |
| | Total | 933746 | 1716922 | 1817749 | 161413 | 1656335 | 3534670 | 99437 | 3435233 | 35509 | 1774 | 33735 | 88 | المجموع | |

## Appendix 4: Paper of the candidate under consideration

This thesis includes material that will be published in international journals. The following is a list of papers of the candidate under consideration, which are direct products from this thesis:

1. Shibania, M., Al-Habaibeha, A., Raidenb, A. and Kettleya, S., Identifying Training Needs in the Libyan Industry Towards Improving Foreign Investment and International Collaboration within the Engineering and Technology Sector. This paper sneds to the Journal of Manufacturing Technology Management on 22/01/2016.

# Towards Improving International Investments in the MENA Region: Identifying Training Needs of The Manufacturing Sector in Libya

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**Abstract:**

**Purpose**

Employees' skills and knowledge are considered one of the main aspects for attracting foreign investors particularly within the manufacturing and engineering sector. If a country has a well advanced training management system with highly skilled labour force within its industry, foreign investors would be keen to invest due to the expected fast return on investment and the expected high level of quality and productivity. In order to encourage international collaboration and foreign investment in the Middle East and North Africa (MENA) region, this paper considers the Libyan manufacturing industry as a case study for evaluating training needs situation. The MENA region enjoys a young population that has a significant advantage to attract foreign industries to invest, particularly with highly educated population in most cases. This paper investigates the current management procedures and practices of Training Needs Analysis (TNA) in two leading engineering companies in Libya to reflect on the cultural and the technical challenges Libyan companies are facing towards assessing and developing a comprehensive training needs analysis system.

**Design methodology**

A comprehensive study has been conducted in two factories at a Libyan steel company (anonymously named A) and a cement company (anonymously named B), based on questionnaires to top managers, line managers and technical workers in addition to interviews with top managers, to identify the current management processes and practices in relation to training needs analysis. The paper investigates the current limitations in the system and clarifies the conceptual boundaries of the training needs of the technical employees.

**Findings**

The results have identified the current limitations in the system and clarified the conceptual boundaries of the training needs of technical employees. Also, this paper has provided a theoretical framework that could help researchers frame their research efforts in Libya and in the MENA region. This is expected to have an impact on the management system and human resource managers in industrial companies across the region and that could help to ensure that employees are well equipped to deal with the industrial sector and its requirements to attract foreign investment and to enhance productivity.

**Originality and value**

Libya is one of the MENA countries that has been for some time isolated from Europe and following the recent political changes, it is becoming important to attract foreign investments to develop the industrial sector further and advance the diversification of the economy. This is important specially with the recent reductions in oil prices. This work on the training needs analysis will help investors and the companies themselves to improve their productivity and to become competitive in the international market. In one hand, this is expected to have an impact on managers in engineering and technology companies across Libya and the MENA region; and this could help to ensure that employees are well equipped to deal with the industrial sector and its requirements to attract foreign investments. On the other hand, foreign investors will have a better understanding of the training needs for any technology related future development in the MENA region, with particular focus on Libya.

***Keywords** – MENA Region, Foreign investment, Training needs analysis, Management Systems, manufacturing companies, Libyan industry.*

# Appendix 5: Interview Protocol and Consent Form (Arabic & English version)

**مقابلة شبه منظمة**
**-------------**
**دليل أسئلة المقابلة**

**تاريخ المقابلة : / / 2012**
**الوقت: ..........صباحا..........مساء**
**الرمز الرقمي : ....../........**

| **مقدمـــــــــــة** |
|---|

**نهاركم سعيد.**
أنا اسمي محمد على الشيباني أقوم حاليا بالتحضير درجة الدكتوراه بجامعة نوتنغهام ترنت ببريطانيا. وأود التحدث معك حول موضوع تحديد الاحتياجات التدريبيه في الشركة ، وأنا أقوم حاليا باجراء بحث بعنوان " **التحقق من عملية تحليل الاحتياجات التدريبية للموظفين الفنيين في الشركات الصناعية الليبية** ". وهذا اللقاء هو طوعي تماما ، وأنه في أي وقت إذا كنت لا ترغب في الإجابة على سؤال من فضلك أن تقول ذلك. هذه المقابلة يجب أن تأخذ حوالي ساعتين كما شرحت من قبل ، وسوف يتم تسجيل هذه المقابلة بعد موافقتك. أود أن أؤكد لكم أنه سيتم التعامل مع جميع الأجوبة والمعلومات والبيانات بسرية تامة.
**نشكركم جزيل الشكر مقدما على مشاركتكم في هذا البحث.**

| **الجزء 1 : خلفيه الشركة وعن من معه المقابله** |
|---|

**1: معلومات عن الشركة**

1. كيف تصف هذه الشركة؟

........................................................................................................................

2. ماذا تعرف عن نشاط الشركه وانتاجها والعاملين بها؟

........................................................................................................................

3. كيف تقوم الشركه بتحديد اللاحتياجات التدريبية للموظفين الفنيين وما هى متطلبات البرنامج التدريبى؟

........................................................................................................................

**2: الخلفية الخاصة عنك وعن وظيفتك**

1. هل يمكنك وصف دورك الحالي فى العمل بالشركه؟

........................................................................................................................

2. منذ متى وانت في الوضع الحالى؟

........................................................................................................................

3. هل كان لك أى دور فى عمليات التدريب والتطوير بالشركه ؟

........................................................................................................................

| **الجزء 2: تنمية الموارد البشرية والهيكل التنظيمي والخطط والسياسات والاستراتيجيات** |
|---|

**1. هيكل تنمية الموارد البشرية**

1. ما هى الجهه المسؤوله في الشركه عن تنفيذ وظيفة تنمية الموارد البشرية ؟

........................................................................................................................

2. ما هو الدوروالغرض من وظيفة تنمية الموارد البشرية في الشركه؟

..................................................................................................................................

3. ما أنواع الأنشطة التى تشاركون فيها بالاضافه الى مهام وظيفتكم؟

..................................................................................................................................

**2. خطة وسياسات تنمية الموارد البشرية**

1. ما هو دور ادارة الموارد البشريه في صياغة خطط وسياسات التدريب؟

..................................................................................................................................

2. كيف توضع الخطه التدريبيه للشركه ؟

..................................................................................................................................

3. هل تتأثر الخطه بأية عوامل خارجيه عند تحديد الاحتياجات التدريبيه واعداد الخطه؟

4..................................................................................................................................

مراحل تنفيذ الخطة التدريبيه؟

..................................................................................................................................

## الجزء 3: عمليات تحليل الاحتياجات

**1. تحليل الاحتياجات:**

1. هل يمكنك أن تصف عملية تحديد الاحتياجات التدريبية بالشركه؟

..................................................................................................................................

2. ما هو عدد السنوات التى شاركت فيها لاجراء تحليل وتحديد الاحتياجات التدريبيه ؟

| | |
|---|---|
| 1 - 2 -سنوات ☐ | 3-5 سنوات ☐ |
| 6 - 10 سنوات ☐ | أكثر من 10 سنه ☐ |

3. كيف تكون مشاركة الإدارة العليا وكبار المديرين في تحديد الاحتياجات واعداد الخطه؟

..................................................................................................................................

4. هل تميز الشركه بين المهارات الفنيه والمهارات المهنيه والمهارات السلوكيه؟

نعم ☐

كيف؟ ..................................................................................................................................

لا ☐ ......

لماذا؟ ..................................................................................................................................

......

5. هل يتم ربط التدريب بالاداء ؟

نعم ☐

كيف؟ ..................................................................................................................................

لا ☐ ......

لماذا؟ ..................................................................................................................................

6. كيف يشارك الموظفين في تحديد الاحتياجات التدريبيه؟

..................................................................................................................................

**2. تطوير وتنمية أنشطة أدارة تنمية الموارد البشرية**

1. هل ميزانية التدريب منفصلة عن الميزانيات الفرعيه للشركه ؟

نعم ☐

كيف؟ ..................................................................................................................................

لا ☐ .....

لماذا؟ ..................................................................................................................................

2. هل الميزانية كافية لتحقيق أهداف تنمية الموارد البشرية وتدريب وتطويرالموظفين فى كل فتره؟

..................................................................................................................................

3. ما هى التسهيلات المتاحه لدعم تنفيذ عمليات التدريب؟

..................................................................................................................................

4. ما هى أساليب التدريب المستخدمه في تنمية وتطوير الموظفين ، ولماذا؟

..................................................................................................................................

5. هل قامت الشركة بتحديد مؤشرات الأداء المناسبة والتي ترتبط بعوامل النجاح الحاسمة للنشاط؟

..................................................................................................................................

6. كيف تتعامل الشركة مع شكاوى الموظفين من عمليات التدريب؟

..........................................................................................................................................

7. كيف تقييم خطط التدريب فى الشركه؟

..........................................................................................................................................

**الجزء 4: طرق تحليل الاحتياجات التدريبية:**

1. ما هى الأساليب التي تطبقونها في تحديد الاحتياجات التدريبية؟

..........................................................................................................................................

2. ها هى أفضل الطرق المستخدمة في الشركة لتحديد الاحتياجات التدريبية؟

..........................................................................................................................................

3. ما مدى فعالية مثل هذه الأساليب في تحديد الاحتياجات التدريبية؟

..........................................................................................................................................

4. ما هي الصعوبات التى تواجهكم فى تحديد الاحتياجات التدريبية؟

..........................................................................................................................................

5. ما هي المقترحات التى تساهم فى تحسين أساليب تحديد الاحتياجات التدريبية؟

..........................................................................................................................................

أخيرا، هل لديك أي تعليقات أخرى حول تحديد الاحتياجات التدريبية وتود أن تذكرها؟

..........................................................................................................................................

**في النهاية**
**شكرا جزيلا لمنحى وقتك الثمين والمساهمة القيمة في هذه الدراسة.**

**محمد على الشيباني**

## Questions Guide

Date of interview : --- / --- /2012
Time : ………am…………pm
Code : 00-00

**Interview**

**Good Day,**
May name is **Mohamed Ali Shibani**. I'm preparing my PhD program in Trent university, UK. I would like to discuss with you the topic of specifying the training needs in the company. Currently, I'm doing a research entitled "**An investigation into training needs Analysis for technical staff within Libyan Industrial Companies**". This interview is voluntary. If you feel at any moment that you are unwilling to answer these questions please don't hesitate to say so. The interview takes two hours, it will be registered upon your consent, and all data will be kept confidential. Thank you in advance to your contribution in this research.

**Part 1 : company's background & the interviewee**

**1 : information about the company**

1. How do you describe this company ?…………………………………………
2. What do you know about the company's activity, production, and employees ? ………………………………………………………………………………………………
3. How does the company set the training needs of its technicians ? what are the training program requirements ? …………………………………………………………

**2 : Background about you and your job**

1. Could you describe your current role in the company ? ……………………………
2. Have you played any role in training and development processes in the company ? ………………………………………………………………………………………………

**Part 2 : Human resources Development and organisatioal structure, plans, policies and strategies**

**1: Structure of human resources development**

1. What is the body in the company responsible about implementation of human resources development ? …………………………………………………………
2. What is the role and purpose of human resources development in the company ? ………………………………………………………………………………………………
3. What are the types of activities you engage in, plus your job tasks ? …………………

**2: Plan and policies of human resources development**

1. what is the role human resources management plays in formulating training plans and policies ? ………………………………………………………………………
2. How training plan is prepared in the company ? …………………………………
3. Does the plan affect by any factors at the time of specifying the training needs and setting the plan ? ……………………………………………………………
4. What are the stages of implementing the training plan ? ………………………

**Part 3 : Needs Analysis Processes**

**1: Needs Analysis**

1. What are the analysis techniques used to training needs assessment at the three levels? ………………………………………………………………………………………………

3. In what way senior officials contribute in identifying the needs and setting the plan ?

……………………………………………………………………………………………
4. Does the company distinguish between technical, professional, and behavioral skills ?
☐ Yes
How ?.......................................................................................................
☐ No
Why?..........................................................................................................................
5. Does training is linked with performance appraisal?
☐ Yes
How ?.....................................................................................................
☐ No
Why ?...........................................................................................................................
6. How does employees participate in identifying training needs ?
…………………………………………………………………………………………………

**2; Development of management of human resources**

1. Is training budget separate from sub-budget of the company ?
☐ Yes
How ? ...........................................................................................................................
☐ No
Why?...................................................................................................................................
2. Is the budget sufficient to achieve the goals of human resources development and training of employees in this period ? ……………………………………………
3. What facilities available to support training processes? ………………………
4. What are the training methods used by your company in development of employees skills? ……………………………………………………………………
5. Did the company determine appropriate indicators of performance related to crucial factor of success? ………………………………………………………………
6. How does the company deal with employees' complaints from training processes ?
…………………………………………………………………………………
7.How company's training plans is evaluated ? ……………………………………………

**Part 4 : analytical methods of training needs**

1. What are the methods you adopted to identifying training needs ?
…………………………………………………………………………………………
2. To what extent these methods are efficient in identifying training needs ?
…………………………………………………………………………………………
3. What difficulties you encounter in identifying training needs ?
…………………………………………………………………………………………
4. What are your suggestions that contribute in improving methods of training needs ?
…………………………………………………………………………………………

Finally, do you have other comments concerning identifying training needs you would like to make ?
…………………………………………………………………………………………

***Thank you for your time and your valuable contribution in this study.***
***Mohamed Shaibani***

NOTTINGHAM
TRENT UNIVERSITY

## CONSENT FORM

Please read and confirm your consent to being interviewed for this project by a tick (√) in the box(es) and write your job title and dating this form.

Please note that the expected duration of this interview is about two hours.

1. Confirm that the purpose of the project has been explained to me that I have been given information about it in writing, and that I have had the opportunity to ask questions about the research ☐

2. Understand that my participation is voluntary, and that I am free to withdraw at any time without giving any reason and without any implications for my legal rights ☐

3. I agree to take part in this project ☐

The Job title of interviewee: …………………………………………………..

The company's name: ………………………………………….

Signature: …………………………………….

Date: ……./……../ 2012

***Notes:*** *The PhD research under the title of:* ***An investigation into training needs analysis for technical staff within Libyan industrial companies.*** By: Mohamed Shibani, PhD student at *Nottingham Trent University, School of the Architecture, Design and the Built Environment, Nottingham Trent University, Burton Street, Nottingham, NG1 4BU, UK*

Email address: shibanim@yahoo.com

Mobile: 00218913700073

00447832977946

## Appendix 6: Questionnaires (A, B, C and D, English version)

# QUESTIONNAIRE

Questionnaire No; …………….

September …..,2012

## Dear Participant

I am a full time PhD research student at Nottingham Trent University, Nottingham, UK. I am currently doing a research entitled "An investigation into training needs Analysis for technical staff within Libyan Industrial Companies". I am writing to ask for your valuable assistance in completing a questionnaire that is part of my Doctoral research which I am undertaking during my period of study.

The questionnaire should not take very long time to complete and for the vast majority of questions you need only to tick (√) in the appropriate boxes. All the information collected will be treated as strictly confidential and anonymous. No part of the data will be used for any purpose other than this research.

Your participation in this research is extremely important. Please read the questionnaire carefully and answer all the questions. Please is sure to select the statements or answer, which you actually believe to be most true.

Thanking you in advance for your kind cooperation and for spending the time to complete this questionnaire. For any enquires about the survey you can contact me on the following No: 0218913700073

Yours faithfully,

**Mohamed Shibani**
School of Art & Design and the Built Environment,
Nottingham Trent University, Nottingham NG7 2RD, UK.
E-mail: mohamed.shibanim2010@my.ntu.ac.uk

# Questionnaire
# Form (A)

## QUESTIONNAIRE FOR TECHNICIANS

Please answer the following questions by placing a tick (√) in the box that best reflects your answer where:

**Parts one: Personal Information.**

1. Your sex

Male ☐ Female ☐

2. Age group?

Less than 25 years ☐ 26-35 years ☐
36- 45 years ☐ 46-55 years ☐
56-65 years ☐

3. What is your marital status?

Single ☐ Married ☐
Divorced ☐

4. What is the current level of your education?

Primary School ☐ Secondary School ☐
High School ☐
Specialist Institutions ☐ (please specify) ..............................
Professional Certificate ☐ (please specify) ..............................
Diploma ☐ (please specify) ..............................
Higher Diploma ☐ (please specify) ..............................
University Degree ☐ (please specify) ..............................
Master Degree ☐ (please specify) ..............................
PhD Degree ☐ (please specify) ..............................
Other ☐ (please specify) ..............................

5. What was area of specialization?

Sciences ☐ (please specify) ..............................
Engineering ☐ (please specify) ..............................
Technical ☐ (please specify) ..............................
Other ☐ (please specify) ..............................

6. Where did you gain your last qualification from?

Libya ☐
Other Arab countries ☐
The U.K. ☐
The U.S.A. ☐
Canada ☐
Italy ☐
Other ☐ (please specify) .................................

7. What your experience in the company?
   - Less than one year ☐ 1-3 years ☐
   - 4-6 years ☐ 7-10 years ☐
   - More than 10 years ☐

8. What is your present job title?
   - Technical Supervisory ☐
   - Technician Electrical Equipment ☐
   - Technician Mechanical Equipment ☐
   - Technician Hydraulic Equipment ☐
   - Technical Operation ☐ (please specify) ...............................
   - Other ☐ (please specify) ...............................

9. How long have you been in your current job?
   - Less than one year ☐ 1-3 years ☐
   - 4-6 years ☐ More than 7 years ☐

**Part two: The Training Needs Analysis process.**

10. Does your company have its own training center?
    - Yes ☐ No ☐

11. Have you received any training during your employment?
    - Yes ☐ No ☐

## If your answer No, go to question 16.

12. How was your choice or your nomination for the training program?
    - Nomination by the line supervisor ☐
    - Nomination by the Head of Department ☐
    - Nomination by the Director of Administration ☐
    - Nominate by the Training Department ☐
    - Based on the performance report ☐
    - Nomination as a reward ☐
    - Other ☐ (please specify) ...............................

13. Before attending the programme, what is method used with you?
    - Interview ☐
    - Questionnaire ☐
    - Discussion ☐
    - Other ☐ (please specify) ...............................
    - Nothing ☐

14. About Training Programmes:

A. In terms of Place
   - Inside company ☐
   - Abroad ☐ please specify ..................................

B. In terms of time
   - hort term (less than a month) ☐ Long-term ☐

C. In terms of content

General information ☐ Specific work ☐

D. In terms of speciality

The same speciality ☐ Mixed with other ☐

E. In terms of team or group

Same Colleagues ☐ Mixed with other ☐

15. What is your opinion about the attended training courses?

A- I have found the training to be:

- Excellent ☐
- Very Good ☐
- Good ☐
- Poor ☐

B- I have learned from this training:

- To a great extent ☐
- To some extent ☐
- To a little extent ☐
- No learning ☐

C- For me, in my current job, this training has been:

- Extremely useful ☐
- Useful ☐
- Useful to some extent ☐
- Useless ☐

D- I think the training objectives were:

- Achieved ☐
- Achieved to some extent ☐
- Achieved to a little extent ☐
- No achieved ☐

16. How often formal performance appraisals are carried out for you?

- Every 3 Months ☐
- Every 6 Months ☐
- Every 1 Year ☐
- Other ☐ (please specify) ..............................

17. Were you recommended for specific training at your last appraisal?

Yes ☐ No ☐ I don't know ☐

18. Could you propose the areas that you need training in?

Yes ☐ No ☐

19. If Yes Q18, What is the appropriate method for identifying your training needs?

- Questionnaire ☐
- Interview ☐
- Discuss with supervisor ☐
- Group interviews with supervisor ☐
- Other ☐ please specify ...........................................

20. Is there a written job description that explains your duties and responsibilities?

Yes ☐ No ☐

21. If yes Q20, is what written job description related to what you do?

Yes ☐ No ☐

22. In your opinion do you think the following reasons play an important part in your desire to attend any training programme?
    - To enhance the performance in current job ☐
    - To acquire new knowledge and skills for promotion ☐
    - To get to know new people in the course ☐
    - To get a certificate ☐
    - Others ☐ please specify ............................................

23. What do you think about the identification of training needs?
    - Very important ☐
    - Important ☐
    - Unimportant ☐

24. How satisfied are you with the training programmes?
    - Very satisfied ☐
    - Satisfied ☐
    - Neutral ☐
    - Dissatisfied ☐
    - Very Dissatisfied ☐

25. In what way does training impact the outcomes in your company?
    - Productivity and efficiency ☐
    - Increasing job satisfaction ☐
    - Decreasing staff turnover rate ☐
    - Increasing profitability ☐
    - Decreasing absenteeism rate ☐
    - Other ☐ please specify ................................................

26. If you have any other comments or suggestions concerning the training Needs analysis, please state them below.

.......................................................................................................................................

**Thank you very much for your co-operation.**

## Questionnaire
## Form (B)

## QUESTIONNAIRE FOR LINE MANAGERS

Please answer the following questions by placing a tick (√) in the box that best reflects your answer where:

**Parts one: Personal Information.**

1. Your sex

    Male ☐ Female ☐

2. Age group?

    Less than 25 years ☐ 26-35 years ☐
    36- 45 years ☐ 46-55 years ☐
    56-65 years ☐

3. What is your marital status?

    Single ☐ Married ☐
    Divorced ☐

4. What is your current level of education?

    Primary School ☐ Secondary School ☐
    High School ☐
    Specialist Institutions ☐ (please specify) ..............................
    Professional Colleges ☐ (please specify) ...........................
    University Degree ☐ (please specify) ..............................
    Master Degree ☐ (please specify) ..............................
    PhD Degree ☐ (please specify) ..............................
    Others ☐ (please specify) ..............................

5. What was area of specialization?

    Arts ☐ Management ☐
    Accounting ☐ Law ☐
    Sciences ☐ (please specify) ........................
    Engineering ☐ (please specify) ..............................
    Technical ☐ (please specify) ..............................
    Others ☐ (please specify) ..............................

6. Where did you gain your last qualification from?

    Libya ☐
    Other Arab countries ☐
    The U.K. ☐
    The U.S.A. ☐
    Canada ☐
    Italy ☐
    Others ☐ (please specify) ...........................

7. What is your job category (grade/level)?
   - Senior management ☐ (please specify) ..............................
   - Middle management ☐ (please specify) ..............................
   - Junior management ☐ (please specify) ..............................

8. What is your present job title?
   - Training Department ☐(please specify) ......................
   - Personnel management ☐ (please specify) .................
   - Senior manager ☐ (please specify) ..................
   - General manager ☐ (please specify) .....................
   - Supervisor ☐ (please specify) .....................
   - Others ☐ (please specify) ..............

9. What is your experience in the company?
   - Less than one year ☐ 1-3 years ☐
   - 4-6 years ☐ 7-10 years ☐
   - More than 10 years ☐

**Part two: The Training Needs Analysis process.**

10. What are the levels that determine the training needs?
    - Organisatio, functions and individuals level ☐
    - Organisatio and individuals level ☐
    - Organisatio and functions level ☐
    - Functions and individuals level ☐
    - Organisatio level ☐
    - Functions level ☐
    - Individuals level ☐

11. Does your company have its own training center?
    Yes ☐ No ☐

12. Do you identify the training needs for your subordinates before their nomination to the training course?
    Yes ☐ No ☐

13. If Yes Q 12, what methods did you use to gather data about your subordinates training needs?
    - Collection of information by training experts ☐
    - Conducting interviews with candidate ☐
    - Discussion with direct subordinates about their training needs. ☐
    - Analysis of functional tasks. ☐
    - Performance report ☐
    - Analysis of technical reports. ☐
    - Questionnaires. ☐
    - Lists of training needs ☐

    Others ☐ (please specify) ..............................

14. What are the barriers hindering effective training needs analysis of trainees?
Please tick (√) in the box that reflects your answer where:
- Inability to describe fully their training needs ☐
- Performance appraisal does not indicate individual's training needs ☐
- Top management is only interested in the result of the training ☐
- There is no written job description for employees ☐
- Questioning on poor performance cause to discomfort for employees ☐
- Others ☐ (please specify) ..............................

15. What the effectiveness of these methods in identifying training needs?

**A - Experts and specialists help in.**
1. Design training programs according the need & abilities of trainees ☐
2. Detection of weaknesses that can be overcome through training ☐
3. Assist in planning training programmes that meet the actual needs ☐

B - **Interviews between the candidate & responsible of training or experts.**
1. Detection of the main trends of training ☐
2. Take the shortcomings and weaknesses by an acceptable method with targeted employees ☐
3. Identify the causes of low productivity and how to overcome them ☐
4. Identify the problems can be solved with training ☐
5. Help to design training programmes in accordance with need and the ability of the trainees ☐

**C - Analysis of performance reports**

1 .Disclose weaknesses, which can be overcome through training ☐
3. Determine the role of training to overcome the deficiencies in the company ☐
3. Reports show the skills gained from training ☐
4. Help design training programs according the needs / ability of trainees ☐

**D - Discussion between the President and subordinates about their training needs.**
1. Help prioritize areas that need training ☐
2. Develop the skills to express needs ☐
3. Helps to identify problems that hinder the efficiency ☐

**H - Analysis of job tasks.**
1. Identify the experience required for success ☐
2. Detection the weaknesses that can be overcome through training ☐
3. Help to design training programs to improve methods of implementatio ☐
4. Detection what skills can be developed through training ☐

**J - Monitoring behaviors in performance.**
1. Assist in planning training programs that address the negative aspects of work ☐
2. Determine the quality of training needed by targeted employees. ☐
3. Help to design training programmes include information and skills necessary for trainees ☐

**G - Analysis of technical reports.**
1. Help to determine the conditions for the expected performance of the activity ☐
2. Describes the problems faced by the company ☐
3. Identify deficiencies in the performance of appropriate training programs ☐

4. Help to design training programs to overcome the negative aspects of behaviou ☐

**H - Questionnaires.**

1. Help know what type of training is needed ☐
2. Assessing the satisfaction about all training programs ☐
3. Help design training programs in a scientific manner ☐
4. Showing training needs by self-vision ☐

**I - lists the training needs**

1. Disclosure of skills that need to be developed ☐
2. Providing information and knowledge to be offered in a training programme ☐
3. Determine the quality of programs needed by the candidates ☐
5. Assisting in the design of training programmes appropriate for job. ☐

16. Does your company have a department/division/unit/section for training affairs?
Yes ☐ No ☐

17. If No Q 16, which department/division/unit/section is responsible for employees' training?
Personnel Department ☐
Financial Department ☐
Product Department ☐
Others ☐ (please specify) .................................

18. In which of the following have you acted as an analyst of training needs ?
Part of committee of training needs ☐
Part of training programmes committee ☐
General manager ☐
Executive manager ☐
Others ☐ (please specify) .................................

19. How long have you been acting as training needs analysis?
1-2 years ☐ 3-5 years ☐
6-10 years ☐ Over 10 years ☐

20. Do you agree with any of the following statements ?
The company have a clearly defined strategy relating to human resource development ☐
The company have a specific budget and a clear ongoing plan for training and development ☐
Top management is committed to supports and provides all the facilitation to training and development activities ☐
Executive managers are facilitate the management of training and development activities. ☐
Others ☐(please specify) ............................

21. Who is responsible for formulating training plan and policies in your company?
Top management (chairman, or other members) ☐
Middle management (functional managers) ☐
Department or division of Training and development ☐
Department or division of human resource ☐
Others ☐ please specify .......................................

22. Have you received any training on how to design a training programme?
    Yes ☐ No ☐

23. If Yes Q 22, What is your opinion about the training courses attended during your company?

A- I have found the training:
- Excellent ☐
- Very Good ☐
- Good ☐
- Poor ☐

B- I have learned from this training:
- To a great extent ☐
- To some extent ☐
- To a little extent ☐
- No learning ☐

C- For me, in my current job, this training has been:
- Extremely useful ☐
- Useful ☐
- Useful to some extent ☐
- Useful useless ☐

D- I have found that the training objectives were:
- Achieved ☐
- Achieved to some extent ☐
- Achieved to a little extent ☐
- Not achieved ☐

24. About Training programmes:
    A- In terms of Place
    Inside company ☐
    Abroad ☐ please specify .........................
    B- In terms of time
    Short term(less than a month) ☐
    Long-term ☐
    C- In terms of content
    General information ☐
    Specific work ☐
    D- In terms of speciality
    The same speciality ☐
    Mixed with other ☐
    E- In terms of team or group
    Same Colleagues ☐
    Mixed with other ☐

25. Company efforts in training process: Please tick (√) in the box that best reflects your answer where:
    The Company has succeeded in identifying your needs trainings ☐
    Training helps to know the business requirements of the company ☐
    The company has provided a favourable environment for training ☐

26. What do you think about the identification of training needs?
    - Very important ☐
    - Important ☐
    - Unimportant ☐

27. What methods are used to determine training needs in your company?
    - Questionnaires ☐
    - Interviews with employees ☐
    - Group interviews with managers and supervisors ☐
    - Direct observation ☐
    - Determination through training committee ☐
    - Performance appraisal information. ☐
    - Through a job descriptions for individuals. ☐
    - Others ☐ please specify ...........................................

28. How often formal performance appraisals are carried out for you?
    - Every half year ☐
    - Annually ☐
    - Every 2-3 years ☐
    - Every 4-5 years ☐

29. To what extent do you use the following indicators to assess the training needs?
    - Lack of knowledge ☐
    - Lack of skills ☐
    - Poor performance ☐
    - ntroduction of new work methods ☐
    - Low profitability ☐
    - High turnover ☐
    - Upgrade and transfer employees ☐
    - Low employees morale ☐
    - High absenteeism ☐
    - Increase the accidents at work ☐
    - High damage in product ☐
    - Increase the costs ☐
    - Others ☐ please specify .............................................

30. When is training provided for employees in your company?
    - When employees are newly recruited ☐
    - On new working methods ☐
    - On new equipment ☐
    - Creation of new jobs ☐
    - Compliance with legislation and regulations ☐
    - When performance appraisal assessment show some gap ☐
    - When employees are upgraded to fill new positions ☐
    - Based on the results of training needs analysis ☐
    - When requested by top management. ☐
    - When requested by departments. ☐
    - When requested by employees. ☐
    - Others ☐ please specify .................................................

31. What are the difficulties and challenges that face training needs analysis?
    - Lack of specialise employees to conduct the TNA ☐
    - Lack of long-term plan for developing human resource ☐
    - Some senior managers do not believe in the importance of training ☐
    - Absence of job description to compare job requirement ☐
    - There is no specific body responsible for training ☐
    - Training objectives are not clear ☐
    - A lack of standards to application of systems and regulations ☐
    - Lack of motivation among employees ☐
    - Instrumentality and Nepotism ☐
    - Lack of long-term planning for HRD ☐
    - Employees' recruitment and selection were not in the right place ☐
    - Employees leave the company after training ☐
    - The unwillingness of most managers to send their staff for training ☐
    - Lack of experience of training officials ☐
    - Lack of precise performance standards for the typical worker ☐
    - Lack of Participation of heads of workers in the TNA ☐
    - Dependence on line superiors in the identification of needs ☐
    - Others ☐ please specify ..................................................

32. How satisfied are you with the training programmes?
    - Very satisfied ☐ Satisfied ☐
    - Neutral ☐ Dissatisfied ☐
    - Very Dissatisfied ☐

33. In what way dose training impact the outcomes in your company?
    - Productivity and efficiency ☐
    - Increasing job satisfaction ☐
    - Decreasing turnover rate ☐
    - Increasing profitability ☐
    - Decreasing absenteeism rate ☐
    - Other ☐ please specify ........................................

34. What are proposals that contribute to improving the effectiveness of methods to identify training needs?
    - Awareness of the importance of methods of TNA ☐
    - Training of supervisors and to use various methods of TNA ☐
    - To encourage employees to express their needs ☐
    - Adopted a policy of training and clear and flexible ☐
    - Clarify the roles of each one in the identification of needs ☐
    - Interest in the study of technical reports ☐
    - Analysis of Functional Performance Reports ☐
    - Determine the precise criteria for the performance ☐
    - Issuance of job description for employees ☐
    - Others ☐ please specify .....................................................

35. Do you have any further comments about the training Needs analysis?

.................................................................................................................................

**Thank you very much for your co-operation.**

## Questionnaire
## Form (C)

## QUESTIONNAIRE FOR RESPONSIBLE OF TRAINING.

Please answer the following questions by placing a tick (√) in the box that best reflects your answer where:

**Parts one: Personal Information.**

1. Your sex

Male ☐ Female ☐

2. Age group?

Less than 25 years ☐ 26-35 years ☐
36- 45 years ☐ 46-55 years ☐
56-65 years ☐

3. What is your marital status?

Single ☐ Married ☐
Divorced ☐

4. What is your current level of education?

Primary School ☐ Secodary School ☐
High School ☐
Specialist Institutions ☐ (please specify) ..............................
Professional Colleges ☐ (please specify) ..............................
University Degree ☐ (please specify) ..............................
Master Degree ☐ (please specify) ..............................
PhD Degree ☐ (please specify) ..............................
Others ☐ (please specify) ..............................

5. What was area of specialization?

Arts ☐ Management ☐
Accounting ☐ Law ☐
Sciences ☐ (please specify) ..............................
Engineering ☐ (please specify) ..............................
Technical ☐ (please specify) ..............................
Others ☐ (please specify) ..............................

6. Where did you gain your last qualification from?

Libya ☐
Other Arab countries ☐
The U.K. ☐
The U.S.A. ☐
Canada ☐
Italy ☐
Others ☐ (please specify) ..........................

7. What is your present job title?
   - Training Department ☐ (please specify) ..............................
   - Personnel management ☐ (please specify) ..............................
   - Senior manager ☐ (please specify) ..............................
   - Training Manager ☐ (please specify) ..............................
   - General manager ☐ (please specify) ..............................
   - Others ☐ (please specify) ..............................

8. What is your experience in the company?
   - Less than one year ☐ 1-3 years ☐
   - 4-6 years ☐ 7-10 years ☐
   - More than 10 years ☐

**Part two: The Training Needs Analysis process.**

9. Does your company have its own training center?
   - Yes ☐ No ☐

10. Does your company have a department/division/unit/section for training affairs?
    - Yes ☐ No ☐

11. If Q 9 No, which department/division/unit/section is responsible for employees' training?
    - Personnel Department ☐
    - Financial Department ☐
    - Product Department ☐
    - Others ☐ (please specify) .................................

12. In which of the following have you acted as an analyst of training needs ?
    - Part of committee of training needs ☐
    - Part of training programmes committee ☐
    - General manager ☐
    - Executive manager ☐
    - Others ☐ (please specify) ............................

13. How long have you been acting as training needs analysis?
    - 1-2 years ☐ 3-5 years ☐
    - 6-10 years ☐ Over 10 years ☐

14. Do you agree with any of the following statements?
    - The company have a clearly defined strategy relating to human resource development ☐
    - The company have a specific budget and a clear ongoing plan for training and development ☐
    - Top management is committed to supports and provides all the facilitation to training and development activities ☐
    - Executive managers are facilitate of management of training and development activities. ☐
    - Others ☐ (please specify) .................................

15. Have you received any training during your employment?
    Yes ☐ No ☐

**If your answer No, go to question 19.**

16. In any of the following areas of training?
    - Methods of training needs analysis ☐
    - How to plan the training ☐
    - To design training programmes ☐
    - How to deliver the training ☐
    - Methods evaluate of training programmes ☐

17. About Training programmes:
    A. In terms of Place
       - Inside company ☐
       - Abroad ☐ (please specify) ........................
    B. In terms of time
       - Short term(less than a month) ☐
       - Long-term ☐
    C. In terms of content
       - General information ☐
       - Specific work ☐
    D. In terms of speciality
       - The same speciality ☐
       - Mixed with others ☐
    E. In terms of team or group
       - Same Colleagues ☐
       - Mixed with others ☐

18. What about the training courses attended during your company?

A- I have found the training:
- Excellent ☐
- Very Good ☐
- Good ☐
- Poor ☐

B- I have learned from this training:
- To a great extent ☐
- To some extent ☐
- To a little extent ☐
- No learning ☐

C- For me, in my current job, this training has been:
- Extremely useful ☐
- Useful ☐
- Useful to some extent ☐
- Useless ☐

D- I have found that the training objectives were:
- Achieved ☐
- Achieved to some extent ☐
- Achieved to a little extent ☐
- Not achieved ☐

19. Could you please indicate which of the following can you perform?
    - I can carry out questionnaires and Interviews for TNA ☐
    - I can conduct interviews and questionnaire to gather data about training programme effectiveness ☐
    - I can test trainees' performance as a result of training ☐
    - I can use various statistical tools to analyse the evaluation results ☐

20. Company efforts in training process:
    - Company has succeeded in identifying your needs trainings ☐
    - Training helps to know the business requirements of the company ☐
    - The company has provided a favourable environment for training ☐

21. These are processes that are carried out TNA. Which one have you performed?

| | | | |
|---|---|---|---|
| Document the problem | ☐ | investigate the problem | ☐ |
| Plan the needs analysis | ☐ | Select the technique | ☐ |
| Conduct the analysis | ☐ | Analyse the data | ☐ |
| Report the findings | ☐ | | |

22. What do you think about the identification of training needs?
    - Very important ☐
    - Important ☐
    - Unimportant ☐

23. What methods are used to determine training needs in your company?
    - Questionnaires ☐
    - Interviews with employees ☐
    - Group interviews with managers and supervisors ☐
    - Direct observation ☐
    - Determination through training committee ☐
    - Performance appraisal information. ☐
    - Through a job descriptions for individuals. ☐
    - Other ☐ please specify ............................................

24. What the effectiveness of these methods in identifying training needs?

**A - Experts and specialists help in.**

1. Design training programs according the need & abilities of trainees ☐
2. Detection of weaknesses that can be overcome through training ☐
3. Assist in planning training programmes that meet the actual needs ☐

**B - Interviews between the candidate & responsible of training or experts.**

1. Detection of the main trends of training ☐
2. Take the shortcomings and weaknesses by an acceptable method with targeted employee ☐
3. Identify the causes of low productivity and how to overcome them ☐
4. Identify the problems can be solved with training ☐
5. Help to design training programmes in accordance with need and the ability of the trainees ☐

**C - Analysis of performance reports**

1 .Disclose weaknesses, which can be overcome through training ☐

2. Determine the role of training to overcome the deficiencies in the company ☐
3. Reports show the skills gained from training ☐
4. Help design training programs according the needs / ability of trainees ☐

**D - Discussion between the President and subordinates about their training needs.**

1. Help prioritize areas that need training ☐
2. Develop the skills to express needs ☐
3. Helps to identify problems that hinder the efficiency ☐

**H - Analysis of job tasks.**

1. Identify the experience required for success ☐
2. Detection the weaknesses that can be overcome through training ☐
3. Help to design training programs to improve methods of implementation ☐
4. Detection what skills can be developed through training ☐

**J - Monitoring behaviors in performance.**

1. Assist in planning training programs that address the negative aspects of work ☐
2. Determine the quality of training needed by targeted employees. ☐
3. Help to design training programmes include information and skills necessary for trainees ☐

**G - Analysis of technical reports.**

1. Help to determine the conditions for the expected performance of the activity ☐
2. Describes the problems faced by the company ☐
3. Identify deficiencies in the performance of appropriate training programs ☐
4. Help to design training programs to overcome the negative aspects of behaviou ☐

**H - Questionnaires.**

1. Help know what type of training is needed ☐
2. Assessing the satisfaction about all training programs ☐
3. Help design training programs in a scientific manner ☐
4. Showing training needs by self-vision ☐

**I - lists the training needs**

1. Disclosure of skills that need to be developed ☐
2. Providing information and knowledge to be offered in a training programme ☐
3. Determine the quality of programs needed by the candidates ☐
5. Assisting in the design of training programmes appropriate for job. ☐

25. How often does your company conduct training needs assessment?

| | | | |
|---|---|---|---|
| Every half year | ☐ | Annually | ☐ |
| Every 2-3 years | ☐ | Every 4-5 years | ☐ |

26. To what extent do you use the following cases to assess the training needs?

Lack of knowledge ☐
Lack of skills ☐
Poor performance ☐
Introduction of new work methods ☐
Low profitability ☐
High turnover ☐
Upgrade and transfer employees ☐
Low employees morale ☐
High absenteeism ☐

Increase the accidents at work ☐
High damage in product ☐
Increase the costs ☐
Others ☐ please specify .......................................

27. When training is provided for employees in your company?
When employees are newly recruited ☐
On new working methods ☐
On new equipment ☐
Creation of new jobs ☐
Compliance with legislation and regulations ☐
When performance appraisal assessment show some gap ☐
When employees are upgraded to fill new positions ☐
Based on the results of training needs analysis ☐
When requested by top management. ☐
When requested by departments. ☐
When requested by employees. ☐
Others ☐ please specify .............................................................

28. What are difficulties and challenges that face training needs analysis?
Lack of specialise employees to conduct the TNA ☐
Lack of long-term plan for developing human resource ☐
Some senior managers do not believe in the importance of training ☐
Absence of job description to compare job requirement ☐
There is no specific body responsible for training ☐
Training objectives are not clear ☐
lack of standards to application of systems and regulations ☐
Lack of motivation among employees ☐
Instrumentality and Nepotism ☐
Lack of long-term planning for HRD ☐
Employees' recruitment and selection were not in the right place ☐
Employees leave the company after training ☐
The unwillingness of most managers to send their staff for training ☐
Lack of experience of training officials ☐
Lack of precise performance standards for the typical worker ☐
Lack of Participation of heads of workers in the TNA ☐
Dependence on line superiors in the identification of needs ☐
Others ☐ please specify ...................................................

29. How satisfied are you with the training programmes?.
Very satisfied ☐ Satisfied ☐
Neutral ☐ Dissatisfied ☐
Very Dissatisfied ☐

30. In what way dose training impact the outcomes in your company?
Productivity and efficiency ☐
Increasing job satisfaction ☐
Decreasing turnover rate ☐
Increasing profitability ☐
Decreasing absenteeism rate ☐

Other ☐ please specify .............................................

31. What are proposals that contribute to improving the effectiveness of methods to identify training needs?
    - Awareness of the importance of methods of TNA ☐
    - Training of supervisors and to use various methods of TNA ☐
    - To encourage employees to express their needs ☐
    - Adopted a policy of training and clear and flexible ☐
    - Clarify the roles of each one in the identification of needs ☐
    - Interest in the study of technical reports ☐
    - Analysis of Functional Performance Reports ☐
    - Determine the precise criteria for the performance ☐
    - Issuance of job description for employees ☐
    - Others ☐ please specify ....................................................

32. Do you have any further comments about the training Needs analysis?

.......................................................................................................................................

**Thank you very much for your co-operation.**

## Questionnaire
## Form (D)

## QUESTIONNAIRE FOR THOSE RESPONSIBLE ON TRAINING.

Please complete the following questions by placing a tick (√) in the box that best reflects your answer where:

**Parts one: Personal Information.**

1. Age Group: (Please tick one)
    - 26-35 years ☐ 36- 45 years ☐
    - 46-55 years ☐ 56-65 years ☐

2. What is the current level of your education qualifications? (Please tick one)
    - University Degree ☐ (please specify) ..............................
    - Master Degree ☐ (please specify) ..............................
    - PhD Degree ☐ (please specify) ..............................
    - Others ☐ (please specify) ..............................

3. What is your position at your company? (Please tick one)
    - Training Department ☐ (please specify) ..............................
    - Personnel management ☐ (please specify) ..............................
    - Senior manager ☐ (please specify) ..............................
    - Training Manager ☐ (please specify) ..............................
    - General manager ☐ (please specify) ..............................
    - Others ☐ (please specify) ..............................

4. How many years have been working in this company? (Please tick one)
   4-6 years ☐ 7-10 years ☐ Over 10 years ☐

**Part 2; The Model of Training Needs Analysis (TNA):**

To what extent do you agree or disagree with the following statements. The following statements describe some aspects of TNA in Libyan Industrial Companies (LICs). For each of the following statement, please indicate to what extent do you agree or disagree with those statements in your company by choosing the best scale reflects your answer from (1-Strongly agree) to (5-Strongly disagree).

- Notes: (3 - Neutral) means; Neither agree / Nor disagree.

5. Most problems of the technical staff? Please tick ( √ ) in the box that best reflects your answer where:

| 1-Strongly agree | 2-Agree | 3- Neutral | 4-Disgree | 5-Strongly disagree |
|---|---|---|---|---|

| | Problems of the technical staff | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| 1 | Lack of knowledge | | | | | |
| 2 | Lack of skills | | | | | |
| 3 | Poor performance | | | | | |

6. TNA play important role to ensure training effectiveness improvement. Please tick ( √ ) in the box that best reflects your answer where:

| 1-Strongly agree | 2-Agree | 3- Neutral | 4-Disgree | 5-Strongly disagree |
|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☐ | ☐ |

7. TNA helps to achieve training cost reduction. Please tick ( √ ) in the box that best reflects your answer where:

| 1-Strongly agree | 2-Agree | 3- Neutral | 4-Disgree | 5-Strongly disagree |
|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☐ | ☐ |

8. In order to use qualitative and quantitative data gathering methods effectively, analysts need to possess skills like good communication skills, emphatic listening, interpersonal skills, and the ability to observe objectively and subjectively? Please tick ( √ ) in the box that best reflects your answer where:

| 1-Strongly agree | 2-Agree | 3- Neutral | 4-Disgree | 5-Strongly disagree |
|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☐ | ☐ |

9. Organisatioal analysis helps to locate training in which level, or department or section or professional group. Also, it studies and analyses organisatioal objectives, organisatioal climate and human resources. Please tick ( √ ) in the box that best reflects your answer where:

| 1-Strongly agree | 2-Agree | 3- Neutral | 4-Disgree | 5-Strongly disagree |
|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☐ | ☐ |

10. Operational analysis involves systematic approach to the collection of data about a specific job or group of jobs, and its purpose is to identify what is required from knowledge, skills and attitude to perform duties related for a particular function. Please tick ( √ ) in the box that best reflects your answer where:

| 1-Strongly agree | 2-Agree | 3- Neutral | 4-Disgree | 5-Strongly disagree |
|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☐ | ☐ |

11. Individual analysis can identify deficiencies (skills, knowledge and attitudes). Therefore, the nature and type of individuals who will participate in training can be known in advance. Please tick ( √ ) in the box that best reflects your answer where:

| 1-Strongly agree | 2-Agree | 3- Neutral | 4-Disgree | 5-Strongly disagree |
|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☐ | ☐ |

12. Use these techniques in conducting TNA in organisatioal level. Please tick ( √ ) in the box that best reflects your answer where:

| 1-Strongly agree | 2-Agree | 3- Neutral | 4-Disgree | 5-Strongly disagree |
|---|---|---|---|---|

| | Techniques use | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| 1 | organisatioal scanning (or environmental) | | | | | |
| 2 | balanced scorecard | | | | | |
| 3 | political economic, social, technological (PEST) analysis | | | | | |
| 4 | strengths, weaknesses, opportunities and treats (SWOT) analysis | | | | | |

13. Use these techniques in conducting TNA in operational level. Please tick ( √ ) in the box that best reflects your answer where:

| 1-Strongly agree | 2-Agree | 3- Neutral | 4-Disgree | 5-Strongly disagree |
|---|---|---|---|---|

| | Techniques use | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| 1 | job analysis | | | | | |
| 2 | task analysis | | | | | |
| 3 | competency analysis | | | | | |
| 4 | skills inventory | | | | | |

14. Use these techniques in conducting TNA in individual level. Please tick ( √ ) in the box that best reflects your answer where:

| 1-Strongly agree | 2-Agree | 3- Neutral | 4-Disgree | 5-Strongly disagree |
|---|---|---|---|---|

| | Techniques use | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| 1 | performance appraisal | | | | | |
| 2 | critical Incident | | | | | |
| 3 | diary analysis | | | | | |

15. The Methods Used in collecting statements and information to determine TNA. Please tick ( √ ) in the box that best reflects your answer where:

| 1-Strongly agree | 2-Agree | 3- Neutral | 4-Disgree | 5-Strongly disagree |
|---|---|---|---|---|

| | The Methods Used in collecting | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| 1 | observation | | | | | |
| 2 | group discussion | | | | | |
| 3 | interviews | | | | | |
| 4 | questionnaires | | | | | |
| 5 | skills, knowledge and abilities (SKAs) tests | | | | | |

16. The barriers facing conducting training needs. Please tick ( √ ) in the box that best reflects your answer where:

| 1-Strongly agree | 2-Agree | 3- Neutral | 4-Disgree | 5-Strongly disagree |
|---|---|---|---|---|

| | The barriers | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| 1 | lack job descriptions | | | | | |
| 2 | Lack of adequate expertise | | | | | |
| 3 | Training objectives are not clear | | | | | |
| 4 | The unwillingness of most managers to send their staff for training | | | | | |
| 5 | Lack of precise performance standards for the typical worker | | | | | |
| 6 | Lack of support from top management | | | | | |
| 7 | Lack of funding resources | | | | | |

17. The proposed framework will help to identify the gap between current performance level and the performance required. Please tick ( √ ) in the box that best reflects your answer where:

| 1-Strongly agree | 2-Agree | 3- Neutral | 4-Disgree | 5-Strongly disagree |
|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☐ | ☐ |

18. Do you have any further comments about the suggested model or training Needs analysis?

.....................................................................................................................................

**Many thanks for answering this questionnaire.**

## Appendix 7: Questionnaires (A, B, C and D, Arabic version)

# استبيانه

رقم الاستبيانه :................

التاريخ:   /   /2012

عزيزي المشارك

السلام عليكم ،،،

أنا محمد على االشيبانى طالب دكتوراه نظامى بجامعة نوتنجهام ترنت ، بالمملكة المتحدة. وأنا أقوم حاليا باجراء بحث بعنوان " التحقق من عملية تحليل الاحتياجات التدريبية للموظفين الفنيين في الشركات الصناعية الليبية ". أكتب إليكم سائلا مساعدتكم القيمه في ملء الاستيبانه والتي تعتبر جزء من البحث الذي أجريه خلال فترة دراستي.

من المتوقع أن لن يستغرق ملء الاستيبانه وقتا طويلا ، حيث لا تحتاج غالبية الأسئلة الا لوضع علامة (√) في المربع أو المربعات المناسبة. وسوف تعامل جميع المعلومات التي تم جمعها بسرية تامة ومجهول المصدر. ولن تستخدام أي جزء من البيانات لأي غرض آخر غير هذا البحث.

ان مشاركتكم في هذا البحث في غاية الأهمية لأستكمال هذه الدراسه. لذى يرجى قراءة الاستبيان بعناية والإجابة عن كل الأسئلة. يرجى التأكد من اختيار الجواب المناسب والتي تعتقد فعلا ان تكون صحيحه.

نشكر لكم مقدما حسن تعاونكم وقضاء بعض من وقتكم لاستكمال هذا الاستيبانه. أذا كانت لديكم أي استفسارات حول هذا الاستطلاع يمكنك الاتصال بي على رقم النقال التالي: 0913700073

تفضلوا بقبول فائق الاحترام

والسلام عليكم ورحمة الله وبركاته

الباحث

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# الاستيبانه
## شكل ( أ )
## استبيانه للفنيين

الرجاء الإجابة على الأسئلة التالية بوضع علامة (√) في المربع الذي يعكس أفضل إجابه في الحالات التالية:

**الجزء الأول : المعلومات الشخصية.**

1. الجنس
   - ذكر ☐
   - أنثى ☐
2. الفئه العمريه؟
   - أقل من 25 سنة ☐
   - 26-35 سنة ☐
   - 36-45 سنة ☐
   - 46-55 سنة ☐
   - 56 -65 سنة ☐
3. ما هو وضعك العائلي؟
   - متزوج ☐
   - أعزب ☐
   - مطلق ☐
4. ما هو مؤهلك التعليمى ؟
   - المدرسة الابتدائية ☐
   - الإعدادية ☐
   - الثانوية ☐
   - ثانويه تخصصية ☐
   - شهادة مهنية ☐ يرجى التحديد..............................
   - دبلوم ☐ يرجى التحديد..............................
   - الدبلوم العالي ☐ يرجى التحديد..............................
   - الشهادة الجامعية ☐ يرجى التحديد..............................
   - درجة الماجستير ☐ يرجى التحديد..............................
   - درجة الدكتوراه ☐ يرجى التحديد..............................
   - آخرى ☐ يرجى التحديد..............................
5. ما هو مجال تخصصك؟
   - علوم ☐ يرجى التحديد..............................
   - هندسة ☐ يرجى التحديد..............................
   - تقنية ☐ يرجى التحديد..............................
   - آخرى ☐ يرجى التحديد..............................
6. مكان الحصول على آخر مؤهل؟
   - ليبيا ☐
   - دوله عربية ☐
   - بريطانيا ☐
   - أمريكا ☐
   - كندا ☐
   - ايطاليا ☐
   - آخر ☐ يرجى التحديد..........................
7. ما طول مدة خدمتك بالشركة؟
   - أقل من سنة واحدة ☐
   - 1-3 سنوات ☐
   - 4 -6 سنوات ☐
   - 7-10 سنوات ☐
   - أكثر من 10 سنوات ☐
8. ما هى طبيعة عملك الحالي ؟
   - إشراف فني ☐
   - فني معدات كهربائية ☐
   - فني معدات ميكانيكية ☐
   - فني معدات هيدروليكيه ☐
   - مشغل ☐ يرجى التحديد..............................
   - آخرى ☐ يرجى التحديد..............................

9. ما هى مدة عملك الحالي؟

أقل من سنة واحدة ☐ 1-3 سنوات ☐

4 - 6 سنوات ☐ أكثر من 7 سنوات ☐

**الجزء الثانى: عملية تحليل الاحتياجات التدريبية .**

10. هل لدى شركتك مركز تدريب خاص؟

نعم ☐ لا ☐

11. هل سبق لك وأن تلقيت تدريبا خلال عملك بالشركه؟

نعم ☐ لا ☐

**فى حالة الاجابه بلا أذهب الى السؤال 16.**

12. إذا كان الجواب 9 بنعم ، كيف تم اختيارك أو ترشيحك لبرنامج التدريب؟ يرجى وضع علامة (√) في المربع الذي يعكس أفضل إجابه في الحالات التالية:

الترشيح من المشرف المباشر ☐
الترشيح من رئيس القسم ☐
الترشيح من مدير الإدارة ☐
الترشح من إدارة التدريب ☐
توصيه بتقرير الأداء السنوى ☐
الترشيح كمكافأه ☐
أخرى ☐ يرجى التحديد............. .......................

13. قبل حضورك للبرنامج التدريبى ، يرجى وضع علامة (√) في المربع الذي يعكس أفضل إجابه في الحالات التالية:

هل أجريت معك مقابلة ☐
هل وزع عليك استبيان ☐
هل تم مناقشتك بفكرة البرنامج التدريبي ☐

14. معلومات عن التدريب ، الرجاء وضع علامة (√) في المربع الذي يعكس أفضل إجابه في الحالات التالية:

أـ من حيث المكان

بالداخل ☐ بالخارج ☐

ب ـ من حيث الوقت

على المدى القصير ☐ على المدى الطويل ☐

ج ـ من ناحية مضمون البرنامج

عام ☐ محدد ☐

د ـ من حيث التخصص

نفس التخصص ☐ متنوع ☐

هـ ـ من حيث تكوين المجموعة المتدربيه

من زملائك ☐ مختلط من أماكن أخرى ☐

15. ماذا عن الدورات التدريبية التى حضرتها من خلال الشركه؟ يرجى وضع علامة (√) في المربع الذي يعكس أفضل إجابه في الحالات التالية:

أ ـ كيف وجدت البرنامج التدريب؟

ممتاز ☐
جيد جدا ☐
جيد ☐
ضعيف ☐

ب ـ هل تعلمت من هذا التدريب؟

الى حد كبير ☐
الى حد ما ☐
الى حد قليل ☐
لا شيء ☐

ج ـ ماذا عن دور هذا التدريب في وظيفتي الحالية؟
مفيدة للغاية ☐
مفيد ☐
الى حد ما ☐
لا شيء ☐

د ـ هل وجدت أن أهداف التدريب قد تحققت؟
تحققت ☐
الى حد ما ☐
الى حد قليل ☐
لم تتحقق ☐

16. متى يتم فيها تقييم أدائك السنوى؟
كل ثلاثة أشهر ☐
كل سته أشهر ☐
كل سنه ☐

17. هل تم التوصيه بتدريبك عند تقييم أدائك الأخير؟
نعم ☐ لا ☐ لا أعرف ☐

18. هل يمكنك أن تحدد احتياجاتك التدريبيه؟
نعم ☐ لا ☐

19. إذا كانت اجابة السؤال 18 بنعم ، ما هى الوسائل الجيدة للتعبير عن رأيك فى تحديد احتياجاتك التدريبيه؟ يرجى وضع علامة (√) في المربع الذي يعكس أفضل إجابتك في الحالات التالية:
الاستبيان ☐
المقابلة ☐
المناقشه مع مشرف ☐
المقابلات كمجموعات مع المشرف ☐
اخرى ☐ يرجى تحديد.............................................

20. هل هناك وصف وظيفي مكتوب يوضح واجبات ومسؤوليات وظيفتك الحالية؟
نعم ☐ لا ☐

21. إذا كانت اجابه السؤال 17 بنعم ، هل ما هو مكتوب ما تفعله فعليا فى وظيفتك؟
نعم ☐ لا ☐

22. في رأيك هل تعتقد أن الأسباب التالية قد تلعب دورا هاما في رغبتكم في المشاركة في اى برنامج تدريبي؟ يرجى وضع علامة (√) في المربع الذي يعكس أفضل إجابه في الحالات التالية:
لتعزيز أداء وظيفتي الحالية ☐
لاكتساب معارف ومهارات جديدة ☐
للتعرف على أشخاص جدد ☐
للحصول على شهادة ☐
آخرى ☐ الرجاء تحديد.............................................

23. ما هي وجهة نظرك في تحليل الاحتياجات التدريبية؟
مهم جدا ☐
مهم ☐
غير مهم ☐ لماذا ...............................................

24. ما مدى رضائك على تحليل الاحتياجات التدريبية وبرامج التدريب بالشركه؟
راضى جدا ☐
راضى ☐
محايد ☐
غير راضي ☐
غير راضى جدا ☐ لماذا .................................................

25. ما أثر التدريب على أي من النتائج التنظيمية التالية في شركتك؟ يرجى وضع علامة (√) في المربع الذي يعكس أفضل إجابه في الحالات التالية:

الإنتاجية والكفاءة ☐
زيادة الرضى الوظيفى ☐
انخفاض معدل دوران العماله ☐
زيادة الربحية ☐
انخفاض معدل التغيب عن العمل ☐
اخرى ☐ يرجى تحديد..............................

26. إذا كان لديك أي تعليقات أو اقتراحات بشأن تحليل الاحتياجات التدريبية، يرجى ذكرذلك أدناه؟

.......................................................................................................................................

**شكرا جزيلا على تعاونكم ومساعدتكم.**

الاستبيانه

شكل ( ب )

استبيانه للمشرفين المباشرين

الرجاء الإجابة على الأسئلة التالية بوضع علامة (√) في المربع الذي يعكس أفضل إجابه.

**الجزء الأول : المعلومات الشخصية.**

1. الجنس

ذكر ☐ أنثى ☐

2. الفئه العمريه؟

أقل من 25 سنة ☐ 26-35 سنة ☐
36- 45 سنة ☐ 46-55 سنة ☐
56-65 سنة ☐

3. ما هو وضعك العائلي؟

متزوج ☐ أعزب ☐ مطلق ☐

4. ما هو مؤهلك التعليمى ؟

المدرسة الابتدائية ☐ الإعدادية ☐
الثانوية ☐ ثانويه تخصصية ☐
شهادة مهنية ☐ يرجى التحديد..............................
دبلوم ☐ يرجى التحديد..............................
الدبلوم العالي ☐ يرجى التحديد..............................
الشهادة الجامعية ☐ يرجى التحديد..............................
درجة الماجستير ☐ يرجى التحديد..............................
درجة الدكتوراه ☐ يرجى التحديد..............................
آخرى ☐ يرجى التحديد..............................

5. ما هو مجال التخصصك؟

آداب ☐ يرجى التحديد..............................
اداره ☐ يرجى التحديد..............................
محاسبه ☐ يرجى التحديد..............................
قانون ☐ يرجى التحديد..............................
علوم ☐ يرجى التحديد..............................
هندسة ☐ يرجى التحديد..............................
تقنية ☐ يرجى التحديد..............................
آخرى ☐ يرجى التحديد..............................

6. مكان حصولك على آخر مؤهل؟
- ليبيا ☐
- دوله عربية ☐
- بريطانيا ☐
- أمريكا ☐
- كندا ☐
- ايطاليا ☐
- آخرى ☐ يرجى التحديد...........................

7. فى أى مستوى ادارى تقع وظيفتك ؟
- الاداره العليا ☐ يرجى التحديد..............................
- الاداره الوسطى ☐ يرجى التحديد..............................
- الاداره التنفيذيه ☐ يرجى التحديد..............................

8. ما هى طبيعة عملك الحالي ؟
- شؤون التدريب ☐ يرجى التحديد..............................
- شؤون ادارة الافراد ☐ يرجى التحديد..............................
- مديرعام ☐ يرجى التحديد..............................
- رئيس ☐ يرجى التحديد..............................
- مشرف ☐ يرجى التحديد..............................
- آخرى ☐ يرجى التحديد..............................

9. ما هى مدة عملك الحالي؟
- أقل من سنة واحدة ☐ — 3-1 سنوات ☐
- 4 - 6 سنوات ☐ — أكثر من 7 سنوات ☐

10. ما طول مدة خدمتك بالشركة؟
- أقل من سنة واحدة ☐ — 3-1 سنوات ☐
- 4 -6 سنوات ☐ — 10-7 سنوات ☐
- أكثر من 10 سنوات ☐

**<u>الجزء الثاني: عملية تحليل الاحتياجات التدريبية.</u>**

11. ما هى المستويات التى يتم فيها تحديد الاحتياجاتها التدريبيه؟ يرجى وضع علامة (√) في المربع الذي يعكس أفضل إجابه في الحالات التالية:
- على مستوى المنظمه والوظائف والافراد ☐
- على مستوى المنظمه والافراد ☐
- على مستوى المنظمه والوظائف ☐
- على مستوى الوظائف والافراد ☐
- على مستوى المنظمه ☐
- على مستوى الوظائف ☐
- على مستوى الأفراد ☐

12. هل لدى الشركه مركز تدريب خاص؟
- نعم ☐ — لا ☐

13. هل قمت بتحديد الاحتياجات التدريبية لمرؤوسيك قبل ترشيحهم لدورات تدريبية؟
- نعم ☐ — لا ☐

14. إذا كانت الإجابة السؤال 13 بنعم ، ما هي الطرق التي استخدمتها لجمع البيانات حول تحديد الاحتياجات التدريبيه للمرؤوسين معكم؟ يرجى وضع علامة (√) في المربعات التي تعكس أفضل إجابه في الحالات التالية:

جمع المعلومات من قبل خبراء في التدريب ☐
إجراء مقابلات مع المرشحين ☐
مناقشة مباشره مع المرؤوسين حول احتياجاتهم التدريبية ☐
تحليل المهام الوظيفية ☐
دراسة تقارير الأداء ☐
تحليل التقارير الفنية ☐
الاستبيانات ☐
قوائم الاحتياجات التدريبية ☐
آخرى ☐ يرجى التحديد...........................................

15. هذه العبارات ذات صلة بالعوائق التي قد تحول دون فعالية عملية تحليل الاحتياجات التدريبية. يرجى وضع علامة (√) في المربعات التي تعكس إجابه في الحالات التالية:

المتدربين غير قادرين على وصف كامل احتياجاتهم التدريبية ☐
تقارير تقييم الأداء ليست مصممة لتحديد الاحتياجات التدريبيه للفرد ☐
الإدارة العليا في الشركة تهتم فقط بنتيجة التدريب ☐
لا يوجد وصف وظيفي مكتوب للعاملين ☐
السؤال عن الأداء الضعيف قد يؤدي إلى عدم راحة العاملين ☐
آخرى ☐ يرجى التحديد.......................................................

16. ما مدى فعالية تلك الأساليب فى تحديد الاحتياجات التدريبيه؟ يرجى وضع علامة (√) في المربعات التي تعكس إجابتك في الحالات التالية:

أ - الاعتماد على الخبراء والمتخصصين فى جمع المعلومات وتحليلها .

يساعد على تصميم برامج تدريبيه حسب حاجة وقدرة المتدربين ☐
يكشف جوانب الضعف التى يمكن التغلب عليها من خلال التدريب ☐
يساعد على تخطيط برامج تدريبيه تلبى الاحتياجات الفعليه ☐
آخرى ☐ يرجى التحديد.........................................................

ب - اجراء المقابلات بين خبير التدريب والمرشح للتدريب.

تكشف الاتجاهات الرئيسيه للتدريب ☐
تناول أوجه القصور والضعف بطريقه يقبلها المستهدفين ☐
التعرف على أسباب ضعف الانتاجيه وكيفية التغلب عليها ☐
التعرف على المشاكل التى يمكن حلها بالتدريب ☐
تساعد على تصميم برامج تدريبيه حسب حاجة وقدرة المتدربين ☐
آخرى ☐ يرجى التحديد.........................................................

ج - تحليل تقارير الاداء

تكشف جوانب الضعف التى يمكن التغلب عليها من خلال التدريب ☐
تحديد دور التدريب فى التغلب على أوجه القصور فى الشركه ☐
تبين التقارير المهارات المكتسبه من التدريب ☐
تساعد على تصميم برامج تدريبيه حسب حاجة وقدرة المتدربين ☐
آخرى ☐ يرجى التحديد.........................................................

د - المنافشات بين الرئيس المباشر والمرؤوسين حول احتياجاتهم التدريبيه.

تساعد فى ترتيب أولويات المجالات التى تحتاج الى التدريب ☐
تنمية المهارات فى التعبير عن الاحتياجات ☐
تساعد على تحديد المشكلات التى تعيق الكفأه ☐
آخرى ☐ يرجى التحديد.........................................................

هـ - تحليل المهام الوظيفيه.

تحدد الخبرات المطلوبه للنجاح ☐
تكشف جوانب الضعف التى يمكن التغلب عليها من خلال التدريب ☐
تساعد على تصميم برامج تدريبيه لتحسين أساليب العمل ☐
تكشف المهارات التى يمكن تنميتها من خلال التدريب ☐
آخرى ☐ يرجى التحديد.........................................................

و - ملاحظه السلوك فى الاداء.

تساعد على تخطيط برامج تدريبيه التى تعالج سلبيات العاملين ☐
تحدد نوعية التدريب التى يحتاجها المستهدفون ☐
تساعد على تصميم البرامج التدريبيه ☐
آخرى ☐ يرجى التحديد.........................................................

ز - تحليل التقارير الفنيه.

تساعد على تحديد الظروف المتوقعه لأداء النشاط ☐
توضح المشاكل التى تعانى منها الشركه ☐
تحديد أوجه القصور فى الأداء والبرامج المناسبه للتدريب ☐
تساعد على تصميم البرامج التدريبيه ☐
آخرى ☐ يرجى التحديد..................................................

ح - أستخدام الاستبيانات.

تساعد على معرفة نوع التدريب الذى يحتاجه الفرد ☐
تكسف عن الرضاء عن البرامج التدريبيه ☐
تساعد على تصميم برامج تدريبيه بأسلوب علمى ☐
تبين الرؤيه الذاتيه لكل فرد فى تحديد احتياجاته التدريبيه ☐
آخرى ☐ يرجى التحديد.........................................................

ط - قوائم الاحتياجات التدريبيه

تكشف القوائم عن المهارات التى ينبغى تنميتها ☐
تقدم القوائم المعلومات والمعارف التى تتضمنها البرامج التدريبيه ☐
تحدد نوعية البرامج التى يحتاجها المرشحون ☐
تساعد على تصميم البرامج التدريبيه الملائمه ☐
آخرى ☐ يرجى التحديد.........................................................

17. هل للشركة اداره / مكتب / قسم / وحدة لشؤون التدريب؟

نعم ☐ لا ☐

18. إذا كانت إجابة السؤال 17 بلا ، ما هى الإداره أو القسم المسؤول عن تدريب العاملين؟

ادارة شؤون الافراد ☐
إدارة المالية ☐
إدارة الانتاج ☐
آخرى ☐ يرجى التحديد..............................

19. في أي من الحالات التاليه كنت قد لعبت دور فى عملية تحليل الاحتياجات التدريبية؟ يرجى وضع علامة (√) في المربعات التي تعكس أفضل إجابه في الحالات التالية:

جزء من لجنة تحديد الاحتياجات التدريبية ☐
جزء من لجنة البرامج التدريبية ☐
كمدير العام ☐
كمدير التنفيذي ☐
آخرى ☐ يرجى التحديد...............................................

20. منذ متى وانت تقوم بعملية تحديد الاحتياجات التدريبية؟

1 - 2 -سنوات ☐ 3-5 سنوات ☐
6 - 10 سنوات ☐ أكثر من 10 سنه ☐

21. مع أي من العبارات التالية توافق عليها ؟

الشركة لديها استراتيجية واضحة المعالم فيما يتعلق بتنمية الموارد البشرية ☐
الشركة لديها ميزانية محددة وخطة واضحة ومستمرة للتدريب والتطوير ☐
تلتزم الإدارة العليا بدعم وتوفر جميع التسهيلات لأنشطة التدريب والتطوير ☐
المديرين التنفيذيين يسهلون إدارة أنشطة التدريب والتطوير ☐
آخرى ☐ يرجى التحديد ...............................................

22. ما هى الجهه المسؤوله عن وضع سياسات وخطط التدريب في الشركه؟ يرجى وضع علامة (√) في المربعات التي تعكس أفضل إجابه في الحالات التالية:

- الإدارة العليا (رئيس مجلس الإدارة، أو أعضاء أخرين) ☐
- الإدارة الوسطى (المديرين التنفيذيين) ☐
- إدارة أو شعبة للتدريب والتطوير ☐
- قسم أو شعبة الموارد البشرية ☐
- آخرون ☐ يرجى التحديد.......................................

23. هل تلقيت أي تدريب على كيفية تصميم البرامج التدريبيه؟

نعم ☐ لا ☐

24. إذا كانت اجابة السؤال 23 بنعم ، ماذا عن الدورات التدريبية التى حضرتها من خلال الشركه؟ يرجى وضع علامة (√) في المربع الذي يعكس أفضل إجابه في الحالات التالية:

أ ـ كيف وجدت البرنامج التدريب؟

- ممتاز ☐
- جيد جدا ☐
- جيد ☐
- ضعيف ☐

ب ـ هل تعلمت من هذا التدريب؟

- الى حد كبير ☐
- الى حد ما ☐
- الى حد قليل ☐
- لا شيء ☐

ج ـ ماذا عن دور هذا التدريب في وظيفتي الحالية؟

- مفيدة للغاية ☐
- مفيد ☐
- الى حد ما ☐
- لا شيء ☐

د ـ هل وجدت أن أهداف التدريب قد تحققت؟

- تحققت ☐
- الى حد ما ☐
- الى حد قليل ☐
- لم تتحقق ☐

25. معلومات عن التدريب ، الرجاء وضع علامة (√) في المربع الذي يعكس أفضل إجابه في الحالات التالية:

أـ من حيث المكان

بالداخل ☐ بالخارج ☐

ب ـ من حيث الوقت

على المدى القصير ☐ على المدى الطويل ☐

ج ـ من ناحية مضمون البرنامج

عام ☐ محدد ☐

د ـ من حيث التخصص

نفس التخصص ☐ متنوع ☐

هـ ـ من حيث تكوين المجموعة المتدربيه

من الزملاء ☐ مختلط من أماكن أخرى ☐

26. ما هى مجهودات الشركة في عملية التدريب؟ يرجى وضع علامة (√) في المربعات التي تعكس أفضل إجابه في الحالات التالية:

- نجحت الشركة في تحديد احتياجاتك التدريبيه ☐
- التعرف على متطلبات العمل بالشركة ☐
- توفير بيئة مواتية للتدريب ☐

27. ما هي وجهة نظرك في عملية تحديد الاحتياجات التدريبية؟ يرجى وضع علامة (√) في المربع الذي يعكس أفضل إجابه في الحالات التالية:

مهم جدا ☐

مهم ☐

غير مهم ☐ لماذا ..........................................

28. ما هي الأساليب المستخدمة لتحديد الاحتياجات التدريبية في الشركه؟ يرجى وضع علامة (√) في المربعات الذي تعكس أفضل إجابه في الحالات التالية

الاستبيانات ☐

المقابلات مع الموظفين ☐

مقابلات كمجموعة مع المديرين والمشرفين ☐

الملاحظة المباشرة ☐

التحديد من خلال لجنة التدريب ☐

معلومات تقييم الأداء. ☐

من خلال الوصف الوظيفي ☐

آخرى ☐ يرجى تحديد............................................

29. متى تقوم الشركة بتقييم أدائك ؟

كل ثلاثه أشهر ☐

كل سته أشهر ☐

كل سنه ☐

30. إلى أي مدى يمكنك استخدام المؤشرات التالية للقيام بتقييم الاحتياجات التدريبيه؟ يرجى وضع علامة (√) في المربعات التي تعكس أفضل إجابه في الحالات التالية:

نقص في المعرفة ☐

نقص المهارات ☐

ضعف الأداء ☐

إدخال أساليب عمل جديدة ☐

انخفاض الربحية ☐

ارتفاع معدل دوران العماله ☐

ترقية ونقل الموظفين ☐

انخفاض معنويات الموظفين ☐

ارتفاع نسبة الغياب ☐

زيادة حوادث العمل ☐

ارتفاع التالف من الانتاج ☐

زيادة التكاليف ☐

آخرى ☐ يرجى التحديد............................................

31. متى تقوم الشركه بتوفير التدريب للعاملين ؟ يرجى وضع علامة (√) في المربعات التي تعكس أفضل إجابه في الحالات التالية:

عندما يتم تعيين موظفين حديثا ☐

أساليب عمل جديدة ☐

معدات جديدة ☐

خلق فرص عمل جديده ☐

تطبيق التشريعات واللوائح ☐

عندما يظهرتقييم الأداء فجوة فى الاداء ☐

عند ترقية الموظفين لملء وظائف جديدة ☐

بناء على نتائج تحليل الاحتياجات التدريبية ☐

عندما تطلب من الإدارة العليا. ☐

عندما تطلب من الإدارات التنفيذيه ☐

عندما تطلب من قبل الموظفين. ☐

آخرى ☐ يرجى التحديد..... ..........................................

32. ما هي الصعوبات والتحديات التي تواجه عملية تحديد الاحتياجات التدريبية؟ يرجى وضع علامة (√) في المربعات التي تعكس أفضل إجابه في الحالات التالية:

- قلة الموظفين المتخصصين فى مجال التدريب ☐
- بعض كبار المديرين لا يؤمنون بأهمية التدريب ☐
- عدم وجود وصف وظيفي لمقارنة شروط كل وظيفة ☐
- ليس هناك جهة محددة مسؤولة عن التدريب ☐
- أهداف التدريب ليست واضحة ☐
- عدم وجود معايير لتطبيق النظم واللوائح ☐
- عدم وجود الحافز لدى الموظفين ☐
- الواسطه والمحسوبية ☐
- انعدام التخطيط على المدى الطويل لتنمية الموارد البشرية ☐
- اختياروتعيين الموظفين لا يكون في المكان المناسب ☐
- الموظف يترك العمل في الشركة بعد التدريب ☐
- عدم رغبة معظم المديرين لارسال موظفيها للتدريب ☐
- عدم وجود خبرة للمسؤولين عن التدريب ☐
- عدم وجود معايير أداء دقيقة للعامل النموذجي ☐
- عدم وجود مشاركة من رؤساء العمال ☐
- الاعتماد على الرؤساء المباشرين في تحديد الاحتياجات ☐
- آخرى ☐ يرجى التحديد..................................................

33. ما مدى رضائك على عملية تحديد الاحتياجات التدريبية والبرامج التدريبيه؟ يرجى وضع علامة (√) في المربع الذي يعكس أفضل إجابه في الحالات التالية:

- راضى جدا ☐ راضي ☐
- محايد ☐ غير راضى ☐
- جدا غير راضى ☐ لماذا .........................................

34. ما أثر التدريب على أي من النتائج التنظيمية التالية في الشركه؟ يرجى وضع علامة (√) في المربعات التي تعكس أفضل إجابه في الحالات التالية:

- الإنتاجية والكفاءة ☐
- زيادة الرضى الوظيفى ☐
- انخفاض معدل دوران العماله ☐
- زيادة الربحية ☐
- انخفاض معدل التغيب عن العمل ☐
- اخرى ☐ يرجى تحديد................................................

35. ما هي المقترحات التي قد تساهم في تحسين فعالية أساليب تحديد الاحتياجات التدريبية بالشركه؟ يرجى وضع علامة (√) في المربعات التي تعكس أفضل إجابه في الحالات التالية:

- التوعيه بأهمية أساليب ☐
- تدريب المشرفين على استخدام الأساليب المختلفة ☐
- تشجيع الموظفين للتعبير عن احتياجاتهم التدريبيه ☐
- اعتماد سياسة واضحة ومرنة للتدريب ☐
- توضيح دور كل واحد عند تحديد الاحتياجات ☐
- الاهتمام بدراسة التقارير الفنية ☐
- تحليل تقارير الأداء الوظيفي ☐
- تحديد معايير دقيقة للأداء النموذجى ☐
- إصدار الوصف والتوصيف الوظيفي مكتوب للعاملين ☐
- آخرى ☐ يرجى التحديد..................................................

36. إذا كان لديك أي تعليقات أو اقتراحات بشأن تحديد الاحتياجات التدريبية، يرجى ذكرها أدناه؟

..........................................................................................................................................

**شكرا جزيلا على تعاونكم ومساعدتكم**

**الاستيبانه**

**شكل ( ج )**

**استبيانه لمسؤولى التدريب**

الرجاء الإجابة على الأسئلة التالية بوضع علامة (√) في المربع الذي يعكس أفضل إجابه.

**الجزء الأول : المعلومات الشخصية.**

1. الجنس

ذكر ☐ أنثى ☐

2. الفئه العمريه؟

أقل من 25 سنة ☐ 26-35 سنة ☐
36 - 45 سنة ☐ 46-55 سنة ☐
56-65 سنة ☐

3. ما هو وضعك العائلي؟

متزوج ☐ أعزب ☐ مطلق ☐

4. ما هو مؤهلك التعليمى ؟

المدرسة الابتدائية ☐ الإعدادية ☐
الثانوية ☐ ثانويه تخصصية ☐
شهادة مهنية ☐ يرجى التحديد..............................
دبلوم ☐ يرجى التحديد..............................
الدبلوم العالي ☐ يرجى التحديد..............................
الشهادة الجامعية ☐ يرجى التحديد..............................
درجة الماجستير ☐ يرجى التحديد..............................
درجة الدكتوراه ☐ يرجى التحديد..............................
آخرى ☐ يرجى التحديد..............................

5. ما هو مجال التخصص؟

آداب ☐ يرجى التحديد..............................
اداره ☐ يرجى التحديد..............................
محاسبه ☐ يرجى التحديد..............................
قانون ☐ يرجى التحديد..............................
علوم ☐ يرجى التحديد..............................
هندسة ☐ يرجى التحديد..............................
تقنية ☐ يرجى التحديد..............................
آخرى ☐ يرجى التحديد..............................

6. مكان حصولك على آخر مؤهل؟

ليبيا ☐
دوله عربية ☐
بريطانيا ☐
أمريكا ☐
كندا ☐
ايطاليا ☐
آخر ☐ يرجى التحديد...........................

7. ما هو مجال التخصصك؟

الآداب ☐ الإدارة ☐
المحاسبة ☐ القانون ☐
العلوم ☐ يرجى التحديد..............................
الهندسة ☐ يرجى التحديد..............................
آخرى ☐ يرجى التحديد..............................

8. ما هى طبيعة عملك الحالي ؟
شؤون التدريب ☐ يرجى التحديد..............................
شؤون ادارة الافراد ☐ يرجى التحديد..............................
مديرعام ☐ يرجى التحديد..............................
مدير تدريب ☐ يرجى التحديد..............................
مدير اداره ☐ يرجى التحديد..............................
آخرى ☐ يرجى التحديد..............................

9. ما هى مدة عملك الحالي؟
أقل من سنة واحدة ☐ 1-3 سنوات ☐
4 - 6 سنوات ☐ أكثر من 7 سنوات ☐

10. ما هى مدة خدمتك بالشركة؟
أقل من سنة واحدة ☐ 1-3 سنوات ☐
4 -6 سنوات ☐ 7-10 سنوات ☐
أكثر من 10 سنوات ☐

**<u>الجزء الثاني: الاحتياجات التدريبية عملية التحليل.</u>**

11. هل لدى الشركه مركز تدريب خاص؟
نعم ☐ لا ☐

12. هل للشركة اداره / مكتب / قسم / وحدة لشؤون التدريب؟
نعم ☐ لا ☐

13. إذا كانت إجابة السؤال 12 بلا ، ما هى الإداره أو القسم المسؤول عن تدريب الموظفين؟
شؤون الافراد ☐
إدارة المالية ☐
إدارة الانتاج ☐
آخرى ☐ يرجى التحديد..............................

14. في أي من الحالات التاليه قد لعبت دورا فى عملية تحديد الاحتياجات التدريبية؟ يرجى وضع علامة (√) في المربعات التي تعكس أفضل إجابه في الحالات التالية:
جزء من لجنة تحديد الاحتياجات التدريبية ☐
جزء من لجنة البرامج التدريبية ☐
كمدير العام ☐
كمدير التنفيذي ☐
آخرى ☐ يرجى التحديد................................................

15. منذ متى وأنت تقوم بعملية تحليل وتحديد الاحتياجات التدريبية؟
1 - 2 -سنوات ☐ 3-5 سنوات ☐
6 - 10 سنوات ☐ أكثر من 10 سنه ☐

16. العبارات التالية تبين مدى نجاح الشركه فى انشطة التدريب ؟ يرجى وضع علامة (√) في المربعات التي تعكس أفضل إجابه في الحالات التالية:
الشركة لديها استراتيجية واضحة المعالم فيما يتعلق بتنمية الموارد البشرية ☐
الشركة لديها ميزانية محددة وخطة واضحة مستمرة للتدريب والتطوير ☐
تلتزم الإدارة العليا بدعم وتوفر جميع التسهيلات لأنشطة التدريب والتطوير ☐
المديرين التنفيذيين يسهلون إدارة أنشطة التدريب والتطوير ☐
آخرى ☐ يرجى التحديد ................................................

17. هل تلقيت أي تدريب على كيفية تصميم البرامج التدريبيه؟
نعم ☐ لا ☐

18. إذا كانت اجابة السؤال 17 بنعم ، في أي من المجالات التالية كان التدريب؟ يرجى وضع علامة (√) في المربعات التي تعكس أفضل إجابه في الحالات التالية:
أساليب تحليل الاحتياجات التدريبية ☐
كيفية التخطيط للتدريب ☐
تصميم البرامج التدريبية ☐
كيفية توصيل التدريب ☐
طرق تقييم البرامج التدريبية ☐

19. معلومات عن التدريب ، الرجاء وضع علامة (√) في المربع الذي يعكس أفضل إجابتك في الحالات التالية:
أ- من حيث المكان
بالداخل ☐ بالخارج ☐
ب - من حيث الوقت
على المدى القصير ☐ على المدى الطويل ☐
ج - من ناحية مضمون البرنامج
عام ☐ محدد ☐
د - من حيث التخصص
نفس التخصص ☐ متنوع ☐
هـ - من حيث تكوين المجموعة المتدربيه
من الزملاء ☐ مختلط من أماكن أخرى ☐

20. ماذا عن الدورات التدريبية التى حضرتها من خلال الشركه؟ يرجى وضع علامة (√) في المربع الذي يعكس أفضل إجابه في الحالات التالية:
أ - كيف وجدت البرنامج التدريب؟
ممتاز ☐ جيد جدا ☐
جيد ☐ ضعيف ☐
ب - هل تعلمت من هذا التدريب؟
الى حد كبير ☐ الى حد ما ☐
الى حد قليل ☐ لا شيء ☐
ج - ماذا عن دور هذا التدريب في وظيفتي الحالية؟
مفيدة للغاية ☐ مفيد ☐
الى حد ما ☐ لا شىء ☐
د - هل وجدت أن أهداف التدريب قد تحققت؟
تحققت ☐ الى حد ما ☐
الى حد قليل ☐ لم تتحقق ☐

21. هل يمكنك أن تشير إلى ما يمكنك القيام به من العبارات التالية؟ يرجى وضع علامة (√) في المربعات التي تعكس أفضل إجابه في الحالات التالية:
يمكنني أن أعداد الاستبيانات والمقابلات ☐
أستطيع إجراء المقابلات والاستبيانات لجمع البيانات حول فعالية البرنامج التدريبي ☐
يمكنني أن اختبار أداء المتدربين نتيجة للتدريب ☐
يمكنني استخدام الأدوات الإحصائية المختلفة لتحليل نتائج التقييم ☐

22. ماذا عن مجهودات الشركة في عملية التدريب : ، يرجى وضع علامة (√) في المربعات التي تعكس أفضل إجابه في الحالات التالية:
قد نجحت الشركة في تحديد احتياجاتك التدريبيه ☐

التعرف على متطلبات العمل بالشركة ☐
وفرت الشركة بيئة مواتية للتدريب ☐

23. هذه هي العمليات التي تتم لتحديد الاحتياجات التدريبيه ، أين من هذه الخطوات التي قمت بها أو شاركت فيها؟ يرجى وضع علامة (√) في المربعات التي تعكس أفضل إجابه في الحالات التالية:

توثيق مشكلة ☐
التحقيق في المشكلة ☐
التخطيط لتحليل الاحتياجات ☐
تحديد الأسلوب ☐
إجراء التحليل ☐
تحليل البيانات ☐
تقرير النتائج ☐

24. ما هي وجهة نظرك في عملية تحديد الاحتياجات التدريبية بالشركه؟ يرجى وضع علامة (√) في المربع الذي يعكس أفضل إجابه في الحالات التالية:

مهم جدا ☐
مهم ☐
غير مهم ☐ لماذا.....................................

25. ما هي الأساليب المستخدمة لتحديد الاحتياجات التدريبية في الشركه؟ يرجى وضع علامة (√) في المربعات التي تعكس أفضل إجابه في الحالات التالية:

الاستبيانات ☐
المقابلات مع الموظفين ☐
مقابلات كمجموعة مع المديرين والمشرفين ☐
الملاحظة المباشرة ☐
التحديد من خلال لجنة التدريب ☐
معلومات تقييم الأداء. ☐
من خلال الوصف الوظيفي ☐
آخرى ☐ يرجى تحديد.............................................

26. ما مدى فعالية هذه الأساليب فى تحديد الاحتياجات التدريبيه؟ يرجى وضع علامة (√) في المربعات التي تعكس أفضل إجابه في الحالات التالية:

أ - الاعتماد على الخبراء والمتخصصين فى جمع المعلومات وتحليلها .

يساعد على تصميم برامج تدريبيه حسب حاجة وقدرة المتدربين ☐
تكشف جوانب الصعف التى يمكن التغلب عليها من خلال التدريب ☐
يساعد على تخطيط برامج تدريبيه تلبى الاحتياجات الفعليه ☐
آخرى ☐ يرجى التحديد .............................................

ب - اجراء المقابلات بين خبير التدريب والمرشح للتدريب.

تكشف الاتجاهات الرئيسيه للتدريب ☐
تناول أوجه القصور والضعف بطريفه يقبلها المستهدفين ☐
التعرف على أسباب ضعف الانتاجيه وكيفية التغلب عليها ☐
التعرف على المشاكل التى يمكن حلها بالتدريب ☐
تساعد على تصميم برامج تدريبيه حسب حاجة وقدرة المتدربين ☐
آخرى ☐ يرجى التحديد .............................................

ج - تحليل تقارير الاداء

تكشف جوانب الصعف التى يمكن التغلب عليها من خلال التدريب ☐
تحديد دور التدريب فى التغلب على أوجه القصور فى الشركه ☐
تبين التقارير المهارات المكتسبه من التدريب ☐
تساعد على تصميم برامج تدريبيه حسب حاجة وقدرة المتدربين ☐
آخرى ☐ يرجى التحديد .............................................

د - المنافشات بين الرئيس المباشر والمرؤوسين حول احتياجاتهم التدريبيه.
تساعد فى ترتيب أولويات المجالات التى تحتاج الى التدريب ☐
تنمية المهارات فى التعبير عن الاحتياجات ☐
تساعد على تحديد المشكلات التى تعيق الكفأه ☐
آخرى ☐ يرجى التحديد ..............................................

هـ - تحليل المهام الوظيفيه.
تحدد الخبرات المطلوبه للنجاح ☐
تكشف جوانب الصعف التى يمكن التغلب عليها من خلال التدريب ☐
تساعد على تصميم برامج تدريبيه لتحسين أساليب العمل ☐
تكشف المهارات التى يمكن تنميتها من خلال التدريب ☐
آخرى ☐ يرجى التحديد ..............................................

و - ملاحظه السلوك فى الاداء.
تساعد على تخطيط برامج تدريبيه التى تعالج سلبيات العاملين ☐
تحدد نوعية التدريب التى يحتاجها المستهدفون ☐
تساعد على تصميم البرامج التدريبيه ☐
آخرى ☐ يرجى التحديد ..............................................

ز - تحليل التقارير الفنيه.
يساعد على تحديد الظروف المتوقعه لأداء النشاط ☐
يوضح المشاكل التى تعانى منها الشركه ☐
يحديد أوجه القصور فى الأداء والبرامج المناسبه للتدريب ☐
يساعد على تصميم البرامج التدريبيه ☐
آخرى ☐ يرجى التحديد ..............................................

ح - أستخدام الاستبيانات.
تساعد على معرفة نوع التدريب الذى يحتاجه الفرد ☐
تكسف عن الرضاء عن البرامج التدريبيه ☐
تساعد على تصميم برامج تدريبيه بأسلوب علمى ☐
تبين الرؤيه الذاتيه للاحتياجات التدريبيه ☐
آخرى ☐ يرجى التحديد ..............................................

ط - قوائم الاحتياجات التدريبيه
تكشف القوائم عن المهارات التى ينبغى تنميتها ☐
تقدم القوائم المعلومات والمعارف التى تتضمنها البرامج التدريبيه ☐
تحدد نوعية البرامج التى يحتاجها المرشحون ☐
تساعد على تصميم البرامج التدريبيه الملائمه ☐
آخرى ☐ يرجى التحديد ..............................................

27. متى تقوم الشركة بتقييم الأداء؟
كل ثلاثه أشهر ☐
كل سته أشهر ☐
كل سنه ☐

28. إلى أي مدى يمكنك استخدام المؤشرات التالية للقيام بتقييم الاحتياجات التدريبيه؟ يرجى وضع علامة (√) في المربعات التي تعكس أفضل إجابه في الحالات التالية:
نقص في المعرفة ☐
نقص المهارات ☐
ضعف الأداء ☐

إدخال أساليب عمل جديدة ☐
انخفاض الربحية ☐
ارتفاع معدل دوران العماله ☐
ترقية ونقل الموظفين ☐
انخفاض معنويات الموظفين ☐
ارتفاع نسبة الغياب ☐
زيادة حوادث العمل ☐
ارتفاع التالف من الانتاج ☐
زيادة التكاليف ☐
آخرى ☐ يرجى التحديد..............................................

29. متى يتم توفير التدريب للعاملين في الشركة ؟ يرجى وضع علامة (√) في المربعات التي تعكس أفضل إجابه فى الحالات الثاليه:

عندما يتم تعيين موظفين حديثا ☐
أساليب عمل جديدة ☐
معدات جديدة ☐
خلق فرص عمل جديده ☐
تطبيق التشريعات واللوائح ☐
عندما يظهرتقييم الأداء فجوة فى الاداء ☐
عند ترقية الموظفين لملء وظائف جديدة ☐
بناء على نتائج تحليل الاحتياجات التدريبية ☐
عندما تطلب من الإدارة العليا. ☐
عندما تطلب من الإدارات التنفيذيه ☐
عندما تطلب من قبل الموظفين. ☐
آخرى ☐ يرجى التحديد..... ..............................................

30. ما هي الصعوبات والتحديات التي تواجه عملية تحديد الاحتياجات التدريبية؟ يرجى وضع علامة (√) في المربعات التي تعكس أفضل إجابه في الحالات التالية:

قلة الموظفين المتخصصين ☐
بعض كبار المديرين لا يؤمنون بأهمية التدريب ☐
عدم وجود وصف وظيفي لمقارنة شروط كل وظيفة ☐
ليس هناك جهة محددة مسؤولة عن التدريب ☐
أهداف التدريب ليست واضحة ☐
عدم وجود معايير لتطبيق النظم واللوائح ☐
عدم وجود الحافز لدى الموظفين ☐
الواسطه والمحسوبية ☐
انعدام التخطيط على المدى الطويل لتنمية الموارد البشرية ☐
اختياروتعيين الموظفين لا يكون في المكان المناسب ☐
الموظف يترك العمل في الشركة بعد التدريب ☐
عدم رغبة معظم المديرين لارسال موظفيها للتدريب ☐
عدم وجود خبرة للمسؤولين عن التدريب ☐
عدم وجود معايير أداء دقيقة للعامل النموذجي ☐
عدم وجود مشاركة من رؤساء العمال ☐
الاعتماد على الرؤساء المباشرين في تحديد الاحتياجات ☐
آخرى ☐ يرجى التحديد...... .............................................

31. ما مدى رضائك على تحليل وتحديد الاحتياجات التدريبية والبرامج التدريبيه؟ يرجى وضع علامة (√) في المربع الذي يعكس أفضل إجابه في الحالات التالية:

راضى جدا ☐ راضي ☐
محايد ☐ غير راضى ☐

جدا غير راضى ☐ لماذا ............................................

32. ما أثر التدريب على أي من النتائج التنظيمية التالية في الشركه؟ يرجى وضع علامة (√) في المربعات التي تعكس أفضل إجابه في الحالات التالية:

- الإنتاجية والكفاءة ☐
- زيادة الرضى الوظيفى ☐
- انخفاض معدل دوران العماله ☐
- زيادة الربحية ☐
- انخفاض معدل التغيب عن العمل ☐
- اخرى ☐ يرجى تحديد... ..............................................

33. ما هي المقترحات التي قد تساهم في تحسين فعالية أساليب تحديد الاحتياجات التدريبية بالشركه؟ يرجى وضع علامة (√) في المربعات التي تعكس أفضل إجابه في الحالات التالية:

- التوعيه بأهمية أساليب ☐
- تدريب المشرفين على استخدام الأساليب المختلفة ☐
- لتشجيع الموظفين للتعبير عن احتياجاتهم التدريبيه ☐
- اعتماد سياسة واضحة ومرنة للتدريب ☐
- توضيح دور كل واحد عند تحديد الاحتياجات ☐
- الاهتمام بدراسة التقارير الفنية ☐
- تحليل تقارير الأداء الوظيفي ☐
- تحديد معايير دقيقة للأداء النموذجى ☐
- إصدار التوصيف الوظيفي مكتوب للعاملين ☐
- آخرى ☐ يرجى التحديد....... ...............................................

34. إذا كان لديك أي تعليقات أو اقتراحات بشأن تحديد الاحتياجات التدريبية، يرجى ذكرها أدناه؟

..........................................................................................................................................

**شكرا جزيلا على تعاونكم ومساعدتكم**

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## ألاستبيانه
## شكل ( د )
## استبيانه لاختبار صلاحية النموذج المقترح لتحديد الاحتياجات التدريبية

الرجاء الإجابة علي الأسئلة التالية بوضوع علامة (✓) في المربع الذي يعكس أفضل إجابة .

**<u>الجزء الأول : المعلومات الشخصية .</u>**

1. **الفئة العمرية ؟**

26-35 سنة ☐ 36-45 سنة☐ 46-55 سنة☐ 56-65 سنة☐

2. **المؤهل التعليمي ؟**

- الشهادة الجامعية ☐ يرجى التحديد .........................
- درجة الماجستير ☐ يرجى التحديد .........................
- درجة الدكتوراه ☐ يرجى التحديد .........................
- آخرى ☐ يرجى التحديد .........................

3. **ماهي طبيعة عملك الحالي ؟**

- مدير عام ☐ يرجى التحديد .........................
- مدير إدارة ☐ يرجى التحديد .........................
- مدير تدريب ☐ يرجى التحديد .........................

شؤون التدريب ☐ يرجى التحديد .........................
شؤون إدارة الأفراد ☐ يرجى التحديد .........................
آخرى ☐ يرجى التحديد .........................

**4. ماهي مدة خدمتك بالشركة ؟**

6-4 سنوات ☐ 10-7 سنوات ☐ أكثر من 10سنوات ☐

**الجزء الثاني :نموذج تحديد الاحتياجات التدريبية.**

العبارات التالية تصف بعض جوانب تحديد الاحتياجات التدريبية في الشركات الصناعية الليبية يرجى الإشارة إلى أي مدى توافق أو لا توافق مع تلك البيانات في الشركة عن طريق اختيار أفضل مقياس يعكس إجابتك من (1-موافق بشدة) إلى (5-غير موافق بشدة).
**ملاحظة:** (3-محايد) يعني لا اوفق/و لا نختلف.

**5. معظم مشاكل الجهاز الفني ؟** يرجى وضع علامة (✓) في المربع الذي يعكس أفضل إجابتك:

| 1-موافق بشدة | 2- موافق | 3- محايد | 4-غير موافق | 5-غير موافق بشدة |
|---|---|---|---|---|

| | مشاكل الجهاز الفنى | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| 1 | النقص في المعرفة | | | | | |
| 2 | نقص المهارات | | | | | |
| 3 | ضعف الأداء | | | | | |

**6. عملية تحديد الاحتياجات التدريب تلعب دور مهم في التأكد من فعالية التدريب وتطويره؟** يرجى وضع علامة (✓) في المربع الذي يعكس أفضل إجابتك:

| 1-موافق بشدة | 2- موافق | 3- محايد | 4-غير موافق | 5-غير موافق بشدة |
|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☐ | ☐ |

**7. تحديد الاحتياجات التدريب يساعد علي تخفيض تكلفة التدريب؟** يرجى وضع علامة (✓) في المربع الذي يعكس أفضل إجابتك:

| 1-موافق بشدة | 2- موافق | 3- محايد | 4-غير موافق | 5-غير موافق بشدة |
|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☐ | ☐ |

**8. من اجل استخدام طرق جمع البيانات والمعلومات الكمية والنوعية يتطلب أن يلم المحلل للاحتياجات التدريبية بمهارات التواصل مع الآخرين والتعامل معهم والقدرة علي مراقبتهم.** يرجى وضع علامة (✓) في المربع الذي يعكس أفضل إجابتك:

| 1-موافق بشدة | 2- موافق | 3- محايد | 4-غير موافق | 5-غير موافق بشدة |
|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☐ | ☐ |

**9. التحليل التنظيمي يساعد علي تحديد المكان الذي يحتاج إلى التدريب بالإضافة إلى دراسة وتحليل أهداف التنظيم والبيئة المحيطة والموارد البشرية؟** يرجى وضع علامة (✓) في المربع الذي يعكس أفضل إجابتك:

| 1-موافق بشدة | 2- موافق | 3- محايد | 4-غير موافق | 5-غير موافق بشدة |
|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☐ | ☐ |

**10. التحليل التشغيلي يتضمن منهجية لتوفير المعلومات والبيانات عن الوصف الوظيفي وتحديد المعارف والمهارات والقدرة المطلوبة لانجاز المهام لكل وظيفة؟** يرجى وضع علامة (✓) في المربع الذي يعكس أفضل إجابتك:

| 1-موافق بشدة | 2- موافق | 3- محايد | 4-غير موافق | 5-غير موافق بشدة |
|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☐ | ☐ |

**11. تحليل احتياجات الأفراد يحدد المهارات والمعارف والمواقف لذى كل فرد ويبين من هم الاشخاص المرشحين للتدريب مستقبلاً؟** يرجى وضع علامة (✓) في المربع الذي يعكس أفضل إجابتك:

**.12**

| 1-موافق بشدة | 2- موافق | 3- محايد | 4-غير موافق | 5-غير موافق بشدة |
|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☐ | ☐ |

**13. لغرض تحليل المستوى التنظيمى يتم استخدام التقنيات التالية؟** يرجى وضع علامة (✓) في المربع الذي يعكس أفضل إجابتك:

| 1-موافق بشدة | 2- موافق | 3- محايد | 4-غير موافق | 5-غير موافق بشدة |
|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☐ | ☐ |

| التقنيات المستخدمة | | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| **1** | المسح التنظيمي (البيئي) | | | | | |
| **2** | بطاقة الأداء المتوازن | | | | | |
| **3** | التحليل الاقتصادي والسياسي ولاجتماعي والثقافي | | | | | |
| **4** | تحليل جوانب القوة والضعف والفرص والعلاج | | | | | |

**14. لغرض تحليل المستوى التشغيلي تستخدم التقنية التالية.** يرجى وضع علامة (✓) في المربع الذي يعكس أفضل إجابتك:

| 1-موافق بشدة | 2- موافق | 3- محايد | 4-غير موافق | 5-غير موافق بشدة |
|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☐ | ☐ |

| التقنيات المستخدمة | | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| **1** | تحليل الوظائف | | | | | |
| **2** | تحليل المهام | | | | | |
| **3** | تحليل الكفاءة | | | | | |
| **4** | حصر المهارات | | | | | |

**15. لغرض تحليل احتياجات الأفراد تستخدم التقنيات التالية.** يرجى وضع علامة (✓) في المربع الذي يعكس أفضل إجابتك:

| 1-موافق بشدة | 2- موافق | 3- محايد | 4-غير موافق | 5-غير موافق بشدة |
|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☐ | ☐ |

| التقنيات المستخدمة | | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| **1** | تقييم الأداء | | | | | |
| **2** | الحوادث الحرجة | | | | | |
| **3** | تحليل المفكرات اليومية(المذكرات) | | | | | |

**16. الطرق المستخدمة في جمع البيانات والمعلومات لتحديد الاحتياجات التدريبية؟** يرجى وضع علامة (✓) في المربع الذي يعكس أفضل إجابتك:

| 1-موافق بشدة | 2- موافق | 3- محايد | 4-غير موافق | 5-غير موافق بشدة |
|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☐ | ☐ |

| الطرق أو الأساليب | | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| **1** | الملاحظات | | | | | |
| **2** | المناقشات الجماعية | | | | | |
| **3** | المقابلات | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 4 | الاستبيانات | | | | | |
| 5 | اختيار المهارات والمعارف والسلوك | | | | | |

**17. الحواجز التي تواجه إجراء تحديد الاحتياجات التدريبية.** يرجى وضع علامة (✓) في المربع الذي يعكس أفضل إجابتك:

| 1-موافق بشدة | 2- موافق | 3- محايد | 4-غير موافق | 5-غير موافق بشدة |
|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☐ | ☐ |

| الحواجز أو المعلومات | | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| 1 | عدم وجود الوصف الوظيفي | | | | | |
| 2 | عدم الاعتماد على الخبراء | | | | | |
| 3 | عدم وضوح أهداف التدريب | | | | | |
| 4 | عدم رغبة المدراء في إرسال العاملين للتدريب | | | | | |
| 5 | عدم وجود معايير لتقييم الأداء | | | | | |
| 6 | نقص دعم الإدارة العليا | | | | | |
| 7 | ضعف الموارد المتخصصة للتدريب | | | | | |

**18. الإطار المقترح سوف يساعد على تحديد الفجوة بين مستوى الأداء الحالي والأداء المطلوب.** يرجى وضع علامة (✓) في المربع الذي يعكس أفضل إجابتك:

| 1-موافق بشدة | 2- موافق | 3- محايد | 4-غير موافق | 5-غير موافق بشدة |
|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☐ | ☐ |

**19. إذا كان لديك أي تعليقات أو اقتراحات بشأن نموذج تحديد الاحتياجات التدريبية, يرجى ذكرها أدناه؟**

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**شكراً جزيلاً علي تكرمك بالإجابة علي هذه ألاستبيانه**