



**IMPACT OF INDUCTION ON EMPLOYEE PERCEPTIONS OF HEALTH AND
SAFETY AT ARCELORMITTAL**

(Vanderbijlpark works)

by

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DECLARATION

This dissertation is submitted in accordance with the requirements for the degree of Magister Technologiae in Human Resource Management. This work has not previously been accepted in substance for any degree and is not being currently submitted in candidature for any degree. This dissertation is the result of my own independent work, except where otherwise stated. Other sources are acknowledged by giving clear references, and a bibliography is appended.

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ABSTRACT

Workplace health and safety is a global concern. South African companies are bound by the stipulations of the Occupational Health and Safety Act (OHSA) (85 of 1993), which regulates employer and employee duties to identify and eliminate hazards, thereby controlling and minimising the risk to health and safety within the working environment. Employees are regarded as the strength of ArcelorMittal. The on-board programme of this employer is designed specifically to support the integration of new employees into ArcelorMittal's environment and enable them to maximise their contribution to the performance of their team, implementation of a business plan and strategy and realisation of the group's objectives. This study investigates the perceptions that ArcelorMittal (Vanderbijlpark) employees uphold regarding the effectiveness of the health and safety induction they received. The iron division was identified purposefully for selection of the target population because of its high rate of health and safety incidents. Simple random sampling was used within a quantitative research design to select 317 respondents out of 634 employees. Accordingly, questionnaires were distributed within the demarcated division and a total of 160 questionnaires were completed and returned. The collected data were statistically analysed and presented. The results indicated that the majority of employees perceive the health and safety induction they received to be effective. Respondents also indicated that ArcelorMittal was effective in providing them with the support they need towards their health and safety. Hence, it is recommended that the zero tolerance approach towards safety hazards be reinforced on a continuous basis within the work context of this leading steel manufacturer.

Keywords: employee induction, health and safety, employees' perceptions

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GLOSSARY OF TERMS

ANOVA: Analysis of variance

BCEA: Basic Conditions of Employment Act (75 of 1997) statistics

COIDA: Compensation for Occupational Injuries and Disease Act (130 of 1993)

ILO: International Labour Organisation

KMO: Kaiser-Meyer-Olkin test

LRA: Labour Relations Act (66 of 1995)

MOSA: Machinery and Occupational Safety Act (6 of 1983)

OHS: Occupational health and safety

OHSA: Occupational Health and Safety Act (85 of 1993)

OHSMS: Occupational Health and Safety Management System

SDA: Skills Development Act (97 of 1998)

SHERQ: Safety, health, environment, risk and quality

TIFR: Total injury frequency rate

CHAPTER ONE: INTRODUCTION AND BACKGROUND OF THE STUDY

1.1 INTRODUCTION AND BACKGROUND

The International Labour Organisation (ILO) estimates that over two million workers die each year from work related accidents (RSA 2007b:3). This bears testament to the fact that employees are exposed to dangerous conditions at their working environment. In South Africa, serious and even life-altering injuries also occur within the working environment because of on-the-job exposure to dangerous substances or conditions (Furter 2003:4; Masia & Pienaar 2011:1).

South African companies are bound by the stipulations of the Occupational Health and Safety Act (OHSA) 85 of 1993 (RSA 1993b:1), which regulate employer's and employee's duties to identify hazards and eliminate, control and minimise the risk to health and safety within the working environment. The implication of this legislation is that organisations should cover any legal and compliance requirements for working at an organisation. This ultimately impacts on their employee induction programmes (Basson, Christianson, Garbers, Le Roux, Mischke & Strydom 2005:351).

Omar, Pillay and Davis (2008:4) and Cheung and Kun Ma (2010: 243) indicated that it is the duty of every employer to conduct their undertaking in such a way that employees are given relevant information concerning health and safety and this information should be included in the induction programme. Asfahl (2003:1-2) further argued that management must decide the target level of the health and safety effort of their organisation. Organisations must therefore implement and maintain worksite safety programmes. Not owning up to this responsibility could result in relatively low levels of health and safety in the workplace.

DeCenzo and Robbins (2006:228) identify induction as an important programme that provides employees with relevant information about health and safety and with regard to

their work environment in general. Grobler, Warnich, Carrel, Elbert and Hatfield (2011:206) however indicate that, most organisations have generally regarded induction programmes as ‘nice-to-have’ procedures. This raises a concern as to value; what is valuable to the employees might not coincide with what is valuable to the organisation. This also has a bearing on compliance with rules and regulations put in place by the organisation. If so, it means that towards health and safety, employees’ behaviour and perceptions might change and affect the state of health and safety so as to have an impact on workplace safety conditions (O’Toole 2004:1; Muniz, Peon & Ordaz (2007:2). Mullins (2006:154) further state that perception is the root of all organisational behaviour, and therefore, organisations should value induction as an important programme that provides information about health and safety, leading to the identification of unsafe behaviours and other causes of accidents (Brown, Willis & Prussia 2003:146).

1.2 PROBLEM STATEMENT

The OHSA (RSA 1993b:1) implies a legislative obligation to ensure the health and safety of persons within the work context. Annandale (2006:1), through his 17 years of involvement with health and safety aspects in South Africa, observed that most employees often do not receive health and safety induction. Saldana, Herrero, Del Campo and Ritzel (2003:1) confirmed that work related accidents are the consequence of dysfunction in existing health and safety programmes. Casio (2006:309-310) and Dessler (2013:126) also indicate that many induction programmes do not include health and safety issues needed by the employees for their health and safety at work. Geminiani in Nortje (2007:1) affirms that accidents occur because employees are not trained adequately in health and safety management.

Despite the desire of workers to work in safe and healthy workplaces (Van Jaarsveld & Van Eck 2005:377-378; Govender 2011:187) stated that unsafe and unhealthy workplaces continue to take a regular and considerable toll on the health and safety and/or lives of employees. The number of workers killed in accidents gives some indication of the extent

of the problem. Despite the existence of health and safety induction programmes, 22 percent of work-related accidents in South Africa took place in the steel industry (RSA 2007a:1). This attests to the fact that health and safety issues lie at the root of most common workplace grievances (Omar *et al.* 2008:4).

Within this context, the South African steel industry sector has been confirmed as being among the country's occupational health and safety high-risk industries (RSA 2007a:1). The demarcated area for this research is ArcelorMittal, Vanderbijlpark, South Africa. According to the World Steel Association (2012:1), ArcelorMittal is the largest steel producer on the African continent, and the world's number one steel company with a production of over 10 million tons of liquid steel in 2011 and 2012. The Vanderbijlpark plant is the largest supplier of flat steel products in sub-Saharan Africa. It has 8173 permanent employees in its operations department (ArcelorMittal Annual Report 2013:40). Although the company has in-house induction and training for their employees (ArcelorMittal 2011:26), ArcelorMittal cumulative statistics of accidents for the year 2012 indicate that 164 were minor accidents, four were restricted work day cases, 44 were lost-time injuries, 10 were cases of dust in the eye, and 29 employees reported for first aid. ArcelorMittal statistics ratio also proves the iron division to have a total of 18 percent incurred injuries (cumulative/per year), 34.27 percent (per year) total injury frequency rate (TIFR), and its TIFR frequency per month indicate 29.01 percent higher than other divisions. In the light of the above, the following research questions were formulated:

- Why is the induction of employees in general necessary?
- What constitutes an effective induction process?
- What are the implications of the OHSA for the induction process?
- What role does induction play in employees' perception of health and safety?
- What factors influence employee's perception of health and safety?
- What are employees' perceptions of health and safety induction at ArcelorMittal?

1.3 RESEARCH OBJECTIVES

1.3.1 Aim

The aim of this study was to determine employee perceptions of the effectiveness of health and safety induction at the ArcelorMittal steel plant in Vanderbijlpark.

1.3.2 Specific objectives

1.3.2.1 Theoretical objectives

- To conduct a literature study to determine the rationale for organisational induction
- To explore the characteristics of effective induction
- To identify the benefits associated with health and safety induction
- To investigate the implications of health and safety training during induction
- To explore the implications of the Occupational Health and Safety Act (85 of 1993) for the management of health and safety
- To reflect upon the rationale for health and safety management
- To investigate the determinants of employee perception
- To explore the relationship between perceptions and resultant actions from the literature
- To contextualise health and safety induction at ArcelorMittal (Vanderbijlpark works)

1.3.2.2 Empirical objectives

- To determine employees' experiences of induction programmes they received at ArcelorMittal (Vanderbijlpark works)
- To gauge the effectiveness of induction programmes employees received at different stages at ArcelorMittal (Vanderbijlpark works)
- To establish the extent of health and safety induction training received by employees at ArcelorMittal (Vanderbijlpark works)

- To measure the effectiveness of health and safety induction undergone by employees at ArcelorMittal (Vanderbijlpark works)

1.4 RESEARCH METHODOLOGY

1.4.1 Literature review

A comprehensive literature study was conducted to establish a broad overview of health and safety. Attention was paid to the legal requirements of health and safety training with special attention being given to health and safety induction. The concepts of health, safety and induction were explored within the scope of the current study, and theoretical objectives of the study were attained using books, journals and online databases.

1.4.2 Empirical study

1.4.2.1 Target population

Research was restricted to employees of ArcelorMittal, Vanderbijlpark works. According to the Sustainability Report (2009:17); ArcelorMittal (2012e:1) and Bruwer (2009), 634 employees were permanently employed in the iron making division. The demarcation provided clear guidance of the total number of subjects included in the study (Brown 2006:66). Therefore, the target population for the study consisted of N= 634 employees in the iron-making division.

1.4.2.2 Sample selection

In an attempt to obtain a realistic and representative sample for the purpose of this study, simple random sampling was used (Babbie 2013:228). The basic principle of probability sampling is to ensure that the sample being studied is representative of the population of interest (Leedy & Ormrod 2010:207). This helps to minimise potential sampling bias that would reduce the ability to make generalisations from the sample to the entire population. Thus, to minimise sampling bias, the probability sampling technique was used so that units from the population were selected at random (Fowler 2009:19).

To achieve this, simple random sampling was used where there was an equal chance that each element of the population could be selected for inclusion in the sample, and would subsequently receive a questionnaire to complete (Black 2012:226). Leedy and Ormrod (2010:207) state that, “if the population size is around 500 and more, 50 percent of the population should be sampled”. Therefore, 50 percent of the total population, that is, a total number of 317 employees was selected randomly out of the total population of 634 employees. Given the relatively representative size of the population, the sample consisted of: $n=317$ employees in the iron-making division.

1.4.2.3 Research design

The method and procedures employed to conduct the study was quantitative in nature. Therefore, a survey design was used to obtain relevant data (Mitchell & Jolley 2012:272). The survey method was chosen due to its ability to accommodate a large sample size, at relatively low cost, and its ease of administration (Zikmund, Babin, Carr & Griffin 2010:220).

1.4.2.4 Measuring instrument

Among the most widely used research instruments, a questionnaire has been the most popular and inexpensive form of data collection (Sekeran & Bougie 2010:184). For this research, a structured questionnaire was developed, and a preformatted set of closed-ended questions were used to capture and record data from respondents. A five-point Likert-scale was also used, as these types of questions were convenient, easier and quicker to complete (Coles, Duval & Shaw 2013:60).

1.4.2.5 Statistical analysis

The data recorded on the filled-in questionnaires were digitised and analysed using Statistical Package for the Social Sciences (SPSS), version 21.0 (Weinberg & Abramovitz 2002:234; Bryman & Cramer 2011:6) with the help of a statistician. Descriptive statistics

were used to analyse the collected data and results were organised, interpreted, summarised and reported by means of pie charts and tables (Wiskers 2001:245; Lowe 2007:114). The ANOVA, t-test and factor analysis were conducted to determine the most important factors. The outcomes of the analysis were integrated with the relevant information obtained from the literature review to derive conclusions and present recommendations.

1.5 THE CONSIDERATION RELATED TO ETHICS WITHIN THE STUDY

Ethical consideration involves the application of fundamental ethical principles to research (Israel & Hay 2006:9). There were many ethical issues taken into serious consideration for this research. This research was built on a foundation of trust that the results reported were anonymous. The results of the research reflected an honest attempt by the study to describe the research accurately and without bias. The researcher secured writer permission from all involved in the study. Information collected was not misused and certain moral responsibilities were maintained. The rights of people in the study, as well as their privacy and sensitivity, were protected (Gregory 2003:67; Long & Johnson 2007:47).

1.6 CHAPTER OUTLINE

Chapter 1: Introduction and overview

Chapter 1 provides a general orientation to the scope of the study, and comprises the background and the importance of the study. It highlights the problem statement, and the research objectives, together with the research methodology.

Chapter 2: Theoretical objectives

This chapter focuses on conceptualising induction and employees' perceptions of health and safety. It provides the rationale for organisational induction, the implications of using induction in an organisation and induction as a continuous process. The roles of

stakeholders within the induction process are clarified and the procedures for organisational induction are explained.

Health and safety, as a component of formal induction, is clarified, and the occupational health and safety legislation and its relevance to the workplace are explored. The statutory duties imposed on role players within the context of OHS Act are also explained. The understanding of the management of health and safety is provided. This chapter also provides an overview of the importance of the health and safety culture in an organisation. Perception and its related concepts are also discussed, while the interactions between perception and resultant actions are explored. Health and safety induction at ArcelorMittal is contextualised in the chapter.

Chapter 3: Research methodology

Chapter 3 provides the overview of the research objectives. The emphasis of this chapter is on the methodology employed, research design, target population, sample frame and sampling techniques utilised to select the sample. It describes in detail the data collection, research instrument used, and the construction of the questionnaire. The pilot study, administration of the actual questionnaire, and validity and reliability of the study are reflected on and explained. The method of data analysis and procedures followed are described in detail. The research ethics and concerns for gathering information from respondents, are also be highlighted.

Chapter 4: Results and findings

This chapter deals with the analysis, interpretation and evaluation of the research findings. It intends to reflect objectively on the analysis of the statistical results. An attempt is made to reflect the impact of induction on employee perceptions of health and safety.

Chapter 5: Conclusion and recommendations

The conclusion and recommendations emanating from the study are discussed. Recommendations based on the conclusion follow. Future research options are identified. The limitations of the study are reflected upon. Finally, the value of the study is considered.

CHAPTER TWO: CONCEPTUALISING INDUCTION AND EMPLOYEES PERCEPTIONS OF HEALTH AND SAFETY

2.1 INTRODUCTION

It is essential to review literature in order to have a clear understanding of the research problem. The concepts in the study have to be clarified. Serinyel (2008:17) and Meleis (2012:374) advocated that concept clarification facilitate the use and understanding of appropriate terminology throughout the study. The rationale for organisational induction was reviewed. Informed by the literature, the implication of using induction, and induction as a continuous process was discussed. The procedures for organisational induction and legislation that govern health and safety (OHSA) in the workplace were reflected upon.

The Occupational Health and Safety Management System (OHSMS) and its elements were clarified. The importance of a health and safety culture in an organisation, as a key element to health and safety management was highlighted. Since culture shapes perceptions, perceptions and its related concepts were explored. The relationship between perception and resultant actions were contemplated.

This chapter concludes with an overview of the actual induction process utilised within the ArcelorMittal context. The procedures and criteria for effective induction at ArcelorMittal were detailed.

2.2 CONCEPTUAL ANALYSIS

Conceptual analysis is a way of finding the basis that essentially belongs to a concept and makes up its definition (Jureta 2011:51). It helps to form and clarify impressions and perceptions. It is provided to make the definitions of the concepts under investigation clear. Concepts can have different meanings and/or implications in different situations or contexts. The meanings attributed to a specific concept, therefore, needs to be refined with

the view to sharpen theoretical definitions and consider interrelationship between different concepts (Dube 2008:8).

Conceptual analysis is regarded as centrally important in all research. To identify and avoid major problems that will obscure the understanding of this study, the applicable terminology will be explained, defining the key concepts to ensure a common understanding throughout (Serinyel 2008:17). Four central concepts, namely induction, effectiveness, health and safety, and perception frame this research.

2.2.1 Induction

The term induction is well documented in previous research (Dube 2008:8; Swanepoel, Erasmus & Schenk 2008:298; Compton, Nankervis & Morrissey 2009:183). Reviews often translate induction widely as a process and a programme of introduction to a particular organisation (Meyer & Kirsten 2005:50; Deb 2006:191; French 2007:270). A process of induction is an initial sharing of information with new employees related to the goals, policies and procedures of the organisation. This basic information, when first introduced to an organisation, provides assistance to know what is expected (Redman & Wilkinson 2002:118; Gomez-Mejia, Balkin & Cardy 2004:287; Meyer 2007:259). This process is often concerned with the new employees' adaptation (Sprogoe & Rhode 2009:48). It involves receiving, welcoming, and introducing new employees to the organisation. New employees are thereby disposed towards the section in which they will be working, their jobs and other employees. This exposure to the unknown attempts to change potential threats of joining an organisation, and helps to ensure that new employees settle down quickly and become productive as soon as possible (Randhawa 2007:108; Swanepoel *et al.* 2008:298).

Induction is a planned and guided programme of new employee adjustment (Charles 2009:250). Kumar (2011a:127) mention that it is a structured programme for employee integration. Durai (2010:172) states that it offers new employees the essential information

and instils in them the knowledge of the organisation to make them feel comfortable in their jobs, to function effectively with a minimum delay.

The definitions above display similarities related to adaptation, acclimatisation, adjustment and association of new employees to the organisation. However, this study considers induction programmes not only to new first time employees in an organisation, but includes existing employees transferred or promoted.

Induction, therefore, relate to all arrangements designed to familiarise new and all current employees with the organisation. The arrangements initiate, shape and assist first work experience to motivate and generate in them a feeling of belongingness, so as to perform better and become productive as soon as possible (Aswathappa 2005:178; Banhegyi *et al.* 2008:259).

2.2.2 Effectiveness

Effectiveness is a topic that has been of considerable importance to organisations. Many theories of organisational processes are oriented towards creating effectiveness. There are various definitions of effectiveness from different perspectives (Liu 2006:8). Authors such as Martz (2008:2) define action as being effective, “if it accomplished its specific objective aim”, which implies the degree to which goals are achieved. Walters (2006:12) labelled it the degree of equivalence between goals and observable outcomes.

The term effectiveness has been used in many different ways in research, but mainly as the attainment of system goals and meeting set criteria. Scheerens, Glas and Thomas (2003:223) propose a similar definition of effectiveness as, “the extent to which the desired level of output is achieved”. For the purpose of this study, effectiveness is defined as a quality attributed by an individual to an activity that is perceived as having produced a desirable effect (Ausenda 2003:221).

2.2.3 Health and safety

Organisations operate in an environment of risks and hazards. Occupational health and safety realities represent one of the many risks to which organisations are exposed. Ariss (2003:9) mentions that both employers and employees need to be aware of the health and safety considerations in an organisation. The concept of health relates to the state of complete physical, mental and social well-being. It can be equated with a condition of bodily and mental welfare (Acutt & Hatting 2011:28). The concept safety implies the need for a generally ordered existence in a stable environment, which is relatively free from threats (Ridley & Channing 2008:134).

Health and safety is the discipline concerned with protecting employees and keeping others from being affected by the activities of the organisation. The safety seeks to make workplaces safe and free from injuries, while health prevents the occurrence of illnesses among employees because of exposures at their workplaces. It implies keeping those employed in an organisation, and those affected by the activities of the organisation, safe and free from ill-health (Perry 2003:1-4, 8-9; Yusof 2008:5).

However, accidents happen in any organisation and are the leading cause of injuries, illness and death. They happen because of unsafe conditions, poorly designed workplaces, or equipment that may pose serious hazards. In an effort to reduce the number of accidents, illness and fatalities within the work context, South Africa opted to regulate workplaces by means of legislation setting out rules and regulations to enforce health and safety standards (Govender 2011:187).

The OHSA (83 of 1993) aims to protect both employees and others from risks at work, and from the effects of hazards, which might arise in a working environment. It ensures that employees are not exposed to hazards that will affect their safety and the safety of those who are in that same work environment (RSA 1993b:1-27). A provision for securing the health and safety of employees at work is a key focus of the OHSA. All areas of

employment activity and the use of machinery (with the exception of miners, owners of certain shipping vessels, those exempted by the minister, and temporary employment services) form the parameters of this legislation (Brandt 2009:8; Sieberhagen, Rothmann & Pienaar 2009:4).

The concept of health and safety, for this study, is defined as a preventative and protective measure to ensure personal safety and general well-being. This implies minimising risks, accidents and injuries in the workplace (Bakri, Zin, Misnan & Mohammed 2006:24), and thereby making the work environment itself physically safer.

2.2.4 Perception

Employees' behaviour is based on their perception of what reality is, not on the reality itself (Robbins, Odendaal & Roodt 2009:119). How employees analyse what they perceive is influenced greatly by various factors, including their experiences, feelings, imagination, values, memories, beliefs, and their cultural settings. Since the content and degree of these influences will be different for everyone, different employees can perceive the same object or event very differently. Consequently, perceptions are unique to each employee (Goldstein 2010:9).

According to Locke (2002:13) perception is a mental process. It requires classification, comparisons of information, and certain decisions before any of the data in the employee's senses become aware of what is out there (Coren, Ward & Enns 2003:14). It deals with an attempt to identify objects and relationships in the outside world. Therefore, employees interpret and organise information to produce a meaningful experience of the world around them (Weiten 2010:128). They function and base their decision in a manner consistent with how they perceive things. In an attempt to make sense of their environment, perception as a process of identifying and becoming conscious informs employees about the objects and individuals in their immediate environment that can

influence or guide their behaviour and how they act in response to it (Blake & Sekular 2006:1, 10, 27; DuBrin & Young 2007:55).

Employees use their senses to collect information and form a representation about the environment. The way they interconnect the stimuli, represent the entire process of becoming aware of the environment, and interpret it so that it will fit into their belief system. Thus, perception is a basic process, activity and state of awareness, which involves an individual who interprets something relating to the individual, the object and the environment, through their senses (Locke 2002:27; Rathus 2008:143).

Within this study, employee perception is defined as the process by which knowledge in the environment is transformed into the experience of objects, or the disposition to believe in particular facts about the environment (Cardwell 2003:180). This relates directly to the way in which employees interpret and give meaning to the environment around them.

Perceptions are formed based upon information that is received from an environment. For example, unsafe working conditions could result in negative perceptions, while safe conditions form positive perceptions about safety in the organisation. A well-presented induction programme therefore enhances positive perceptions about the organisation. Thus, a positive perception is created by positive connections between an employee and the organisation. However, the individual behaviour and personality in an organisation are more likely to affect their perceptions. The entire understanding of and the decision to join the organisation can be influenced and validated by the induction process (Van Jaarsveld 2010:6).

2.3 THE RATIONALE FOR ORGANISATIONAL INDUCTION

Different organisations have their own induction practices. New employees in particular, are portrayed as a group of “absolute beginners” (Daskalaki 2011:5). They come into an

organisation with limited knowledge about its values, key priorities and policies, and the job itself (Cheatle 2001:153).

In assembling a hiring team, management hopes to secure the most able candidate. The hiring process begins as soon as there is a job opening. Posting a job opening and candidates reading and applying for the position is the way to attract prospective candidates immediately and convince them that the organisation is serious about requiring their participation and full contribution. The candidate learns about the organisation's reputation and the type of products or services it provides, which is particularly important and helpful for the new starter to be as well informed as possible about the organisation (Arthur 2006:4; Byars & Rue 2008:206; Hunter 2008:10).

The careful selection of candidates who will be able to adapt to the organisation's existing atmosphere contributes to the decisions that will reflect on their ability to capture a great deal of information and be productive (Federman 2009:122). Both what and how information is delivered during the selection process in the initial phase of the employment process, influences the candidate's impression of the organisation (Byars & Rue 2008:206).

Once the successful candidate is identified and subsequently hired, induction further sets the stage for entry into an organisation. After accepting a job offer, most new employees are very keen to learn about their job and the organisation (Degenaar 2005:94). It is recognised that new employees need some sort of commencement into their new organisation (El-Shamy 2003:3). This is foreseen as a rather basic introduction and assistance process. It usually consists of activities like; a talk on the organisation, its product and services, history, plans and structure, and policies as implemented in the organisation's rules and regulations. This assistance conveys bonding with the organisation and it is the beginning of the integration necessary for the new employees to adjust to a new role and build a relationship with their work unit (Dehaloo 2008:44).

The social context and the relationships with colleagues are key factors in the new employee transition. New employees anticipate the kind of experiences they will have in an organisation. They want to develop a sense of belonging and prefer to be part of the team which creates a favourable atmosphere to work in. Induction thus establishes a base for new employee settling so that the feeling of being out of place is driven away. This is affirmed by Compton *et al.* (2009:183) who indicated that when new employees integrate with an organisation, they bring their own experiences and beliefs in making sense of the new situation. New employees build their own set of expectations and impressions about how their life will be in that organisation. From a practical point of view, these new employees are faced with the surprise of what is actually expected of them in relation to standards and style of work. Therefore, when new employees' expectations are incompatible with the reality of the situation or uncertain, they might become frustrated and end up leaving their work. In reducing the impact of the change to a new situation, induction aims to provide the necessary information to meet the new employee's expectations.

Regardless of similar past experience, it is potentially a stressful experience being a beginner in every situation. New employees often work in isolation and are insecure about their work. They could also experience perceived chaos in the work context. These strange feelings and fears may run high as they struggle to come to terms with their organisation. This might result in a temporary loss of confidence. To counteract this, an induction process aims to create a conducive atmosphere for simultaneous adaptation to lessen the potential stress, subsequently leading to greater productivity and the new employee becoming settled in as soon as possible (Gerber, Nel & Van Dyk 2003:126; Fitz-enz & Davison 2003:233; Foot & Hooks 2005:234; Harding 2008:9; Nel, Werner, Haasbroek, Poisat, Sono & Schultz 2008:168; Tyson & York 2009:139).

Since most employees begin their employment with the desire to “fit in to” be productive and successful, some are far more likely than others are to lose interest within the first few weeks of employment. This is frequently attributed to “job impossibility, poor working conditions and a lack of support from management and colleagues” as well as increased demands from new employees (Branham 2005:23). For the new employees to effectively stay on the job and become productive in an organisation, the alignment of employee values with the organisation’s values, matching the right individual to the right job will aid the process. This in turn influences the employee’s sustained motivation and productivity in an organisation (Nel *et al.* 2008:267).

Induction has a significant impact on the ability to adjust employees to the organisation. New employees’ integration and familiarisation necessitates support and assistance by providing the opportunity to clearly define the nature of work to be done (Meyer & Kirsten 2005:261; Grobler *et al.* 2011:226). This facilitates the relationship between employees’ collaboration within the existing unity of the organisation (Steyn & Van Niekerk 2002:232; Taylor 2005:261).

2.4 THE IMPLICATIONS OF USING INDUCTION IN AN ORGANISATION

Induction needs to ensure that new employees understand the organisation, job and its priorities. The information available identifies multiple benefits and outcomes of an induction programme as argued below:

2.4.1 Value adding properties and consequences of induction

Induction is recognised as an enabling process. Getting all employees to fit in and have positive intentions of staying in the organisation represents the intended ultimate outcome according to Lawson (2002:1-3, 5). A journey of transition to becoming a confident employee can make anyone feel nervous and insecure. New employees are often fearful about how well they would perform, and there is some fear of not succeeding in the new job. These feelings last longer if not given proper attention. Having the right kind of

introduction and spending time on it assists in getting over the strangeness of the work environment quickly. Efforts could be made continually to anticipate these problems and do whatever possible to alleviate fear and anxiety experienced by new employees, thus developing a sense of confidence (Heyns 2001:161).

Induction programmes diminish the feelings of social and emotional vulnerability, and in turn decrease the stress associated with the new position and environment. This allows the learning of interpersonal and operational skills (Chapman 2008:127), thereby instilling the prevailing attitudes, standards, values and expected patterns of behaviour. Through the induction programme, knowledge of how the organisation functions and its priorities manifest in the ways in which employees show heightened levels of job satisfaction and positive attitudes towards the organisation (Kotze & Du Plessis 2003:192; Dessler 2013:247).

Each organisation has its own unique way of doing things. New employees learn and adapt to these cultures within the various occupational fields. Learning how things are done in an organisation instills pride and ensures a high degree of success and commitment. Support within this context represents an opportunity for new employees to function effectively and thereby limits the chances that employees will engage in poor workplace performance (Ku & Kleiner 2002:44; Lashley & Best 2002:6; Kleynhans, Markharm, Meyer, Pilbeam & Van Aswagan 2006:105; Madan 2012:88).

To engage and turn the individuals into productive employees within the shortest possible time shapes their outlook for work and motivation (Mathis & Jackson 2002:79). Dedicated employees, therefore, will show some commitment to achieve the ultimate goal and thrive within the organisation (Arthur 2006:279; Muedi 2008:7; Sang, Ison & Dainty 2009:309). Kaiser (2006:7) emphasised that retaining capable employees is an important challenge. Therefore, reflecting a good atmosphere and creating a favourable image motivates new employees and in turn satisfies their need to grow and develop within an organisation.

Induction has been associated with detailed consideration for all employees. To maintain their motivation, meaningful induction has lasting effects considering the right number of employees with the right skills and abilities. They need the right type of support and guidance, which encourages and motivates them to work towards critical improvements that determine their success in an organisation (Sangale & Webster 2002:12).

Induction programmes can be adapted to meet the specific job requirements. An effective induction programme capitalises on the potential there is in an employee for growth and development. The provision of information to execute jobs successfully, to sustain confidence, and build positive attitudes towards the organisation means an effective start. Therefore, for an organisation to achieve the desired outcomes from its employees, its induction programme must be done effectively (Deb 2006:192).

2.4.2 The outcomes of effective induction

In an effort to address the problems normally associated with all employees, one of the best ways to convince management of the effectiveness of an induction programme is to identify the essential features, the key elements, as well as characteristics of effective induction (Deb 2006:192). Successful induction makes an immediate and lasting impression, which greatly influences the success of an employee on the job. It thus provides a special feeling for new employees to readily assimilate and comprehend organisational practices and activities (Harding 2008:3). Information related to aspects of the organisation will enhance employee commitment and understanding of the organisation within their various roles (Hunter 2008:13).

Employees cannot perform or give their best until they become attuned to the organisation (Malatjie 2004:56). An effective induction programme increases motivation, job satisfaction and positive attitude towards an employer. Furthermore, it maximises performance, thereby lowering labour turnover and reducing absenteeism (Lashley & Best

2002:13; Deb 2006:194; Ivancevich 2007:414; Amos, Ristow, Ristow & Pearse 2008:126).

Effective induction is also regarded as one of the approaches that can be utilised by organisations to prepare existing employees to influence and change the organisation. Due to the potential positive results, the necessity for effective induction is acknowledged. It can be performed efficiently by involving all employees reflecting their specific needs. Therefore, a good induction is a wise investment. Organisations need to be clear who is responsible for the induction programme, who should be inducted and what are the outcomes to be attained (Sutherland & Canwell 2004:135; Rankin 2006:38)

2.4 INDUCTION AS A CONTINUOUS PROCESS

Induction is a never-ending process. Since organisations face ever-changing conditions, it is a continuous process acquainting all employees to the current state of an organisation. New employees are not the only ones exposed to the design and quality of induction programmes. It also applies to existing employees embarking on new roles within an organisation through promotion and transfer (Degenaar 2005:101). Figure 1 illustrates an induction programme as part of the organisation-wide approach to supporting employees.

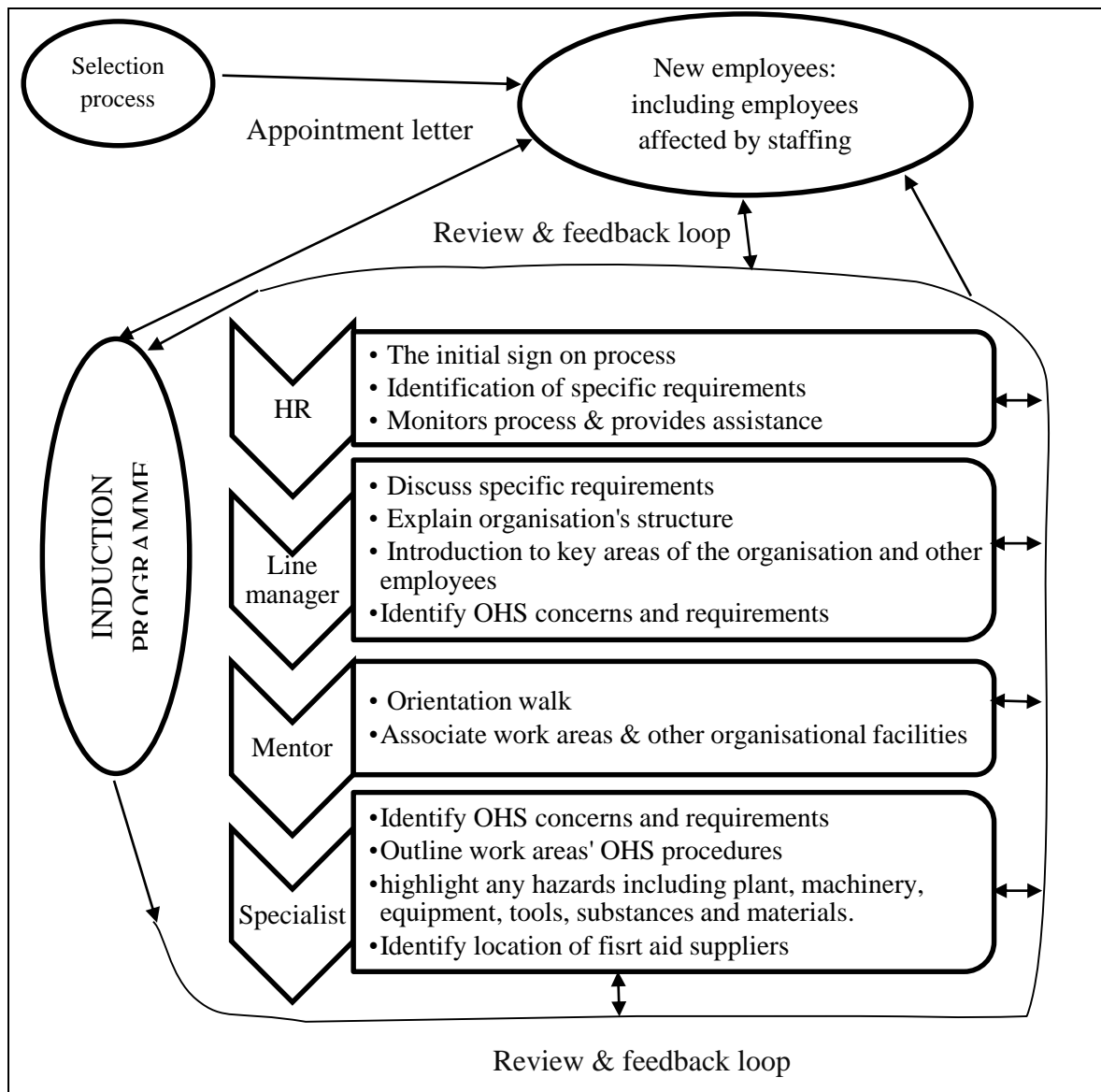


Figure 1: Induction as a continuous process: Review and feedback loop

Sources: Adapted from Clarke (2002:8); Sims (2002:6); Sutherland & Canwell (2004:135); Decenzo & Robbins (2006:198); Sasman (2007:13); Compton *et al.* (2009:186); Antonacopoulou & Guttel (2010:23); Daskalaki (2011:5); Grobler *et al.* (2011:230).

As indicated in Figure 1, organisations provide induction through a common programme tailored to meet job profiles and an organisation's requirements. During the selection process, applicants who fulfill the essential job requirements are selected. After selection is done, efforts are made to increase the knowledge and skill of employees for the successful accomplishment of a specific job (Singla 2010:33 & Madan 2012:88).

Although induction may primarily focus more upon the needs of new employees, each individual in the organisation has different needs and concerns (Chikonde 2008:50). The target employees of the induction programme may involve several employee groups pertaining across the board to all current employees (Sasman 2007:13; Antonacopoulou & Guttel 2010:23).

2.5.1 The target employees within the induction review and feedback loop

The model depicted in Figure 1 also denotes that everyone who works starts out as a new employee. Employees (new or affected by staffing decision) in an organisation encounter adjustments problems when confronted by changes or new information. Therefore, induction as an ongoing process forms part of the organisational success which helps employees to adjust to the organisation quickly.

2.5.1.1 Newly appointed employees

From Figure 1 it can be deduced that new employees are understood to be those who have just taken up an appointment in the organisation (Decenzo & Robbins 2006:198; Daskalaki 2011:5). The Human Resource Department knows them as the consequences of recruitment through the hiring process. They engage themselves in sense making activities through their interaction with the organisation. They are identified as requiring information associated with their job requirements. However, they want to be treated humanely and with respect. In addition, they want to know what is expected and how they will go about learning their new jobs. These employees also need to learn to work with others and acquire more realistic views of the organisation. Within this context, induction

provides support and forms the basis of areas and discipline to work efficacy (Sims 2002:6; Stirzaker 2004:32).

2.5.1.2 Employees affected by staffing decision

Organisations face ever-changing conditions (Compton *et al.* 2009:186). Current employees are assumed to possess the necessary skills, abilities and knowledge in the organisation (Clarke 2002:8). Whenever there is a significant change, organisations set up a developed policy, structures and operating relationships. For employees not to encounter any problems, they need to be scheduled for an induction programme to keep up to date with the changes, or else they may find themselves unaware of the new activities (Compton *et al.* 2009:186).

O'Connor and Letting (2009:262) point out that taking more responsibility, or moving to a new role, present various challenges. Staffing decisions related to internal moves (transferred or promoted employees) within the organisation or department require employees' knowledge or information about their current job. This provides the ability to start an induction programme focused on the outcomes that reduce the complexities as a result of a change in their job role or circumstances. Therefore, they are expected to undertake the induction programme to keep abreast of constantly changing programmes and systems (Sims 2002:6).

2.6 ROLE CLARIFICATION OF STAKEHOLDERS WITHIN THE INDUCTION PROCESS

An induction programme is a continuous process. Degenaar (2005:100) states that, this practical source of information consists of a sequence of support structures to be followed to ensure effective integration of employees. It should be in consultation with different stakeholders forming a joint responsibility. However, for this study, the following individuals are viewed as playing an important part in the employee induction programme as highlighted in Figure 1.

2.6.1 Human resource manager

Marchington and Wilkinson (2005:190) mention that induction can be translated into a combination of group and one-to-one activities. The preliminary induction is primarily carried out by a human resource manager who plays an important part in the process of building a positive relationship and sets the stage for future interaction (Taylor 2005:136). This is the first point of contact of the new employee, where first impressions of the organisation are formed. The main responsibility for implementing and evaluating the induction programme also lies with the human resource manager (Tyson & York 2009:187). Tyson and York (2009) further mention that the induction phase should be regarded as the first stage in the employee development process in which the human resource manager has complementary roles to play. According to Grobler *et al.* (2011:230) these complementary roles relate to going over the terms and conditions of employment, complete any necessary paperwork, and give an overview of the organisation and inform the employees about the organisation and its policies. However, the responsibility is not placed on the human resource manager alone; coordination with the line manager is also important on the arrangements to induct new employees.

2.6.2 Line manager

The line manager is probably the most important person in the induction process and for whom the new employee will be working. The impression this individual makes in the first few days will be a lasting one (Sangale & Webster 2002:26). It is essential, therefore, that the line manager allows enough time to spend with the new employee after induction. A follow-up is important, enabling the employee to apply his/her talents in the workplace (Leonard & Hilgert 2007:359).

The line managers should do the actual job orientation. They provide the general overview of the organisation, in which mission, goals and strategic directions are emphasised. Their support lends legitimacy to the programme as the transition into an organisation can be

seen as a difficult experience that needs special help and support. Their leadership ensures that the programme is headed in the right direction and it is important for creating the right impression of the organisation (Lashley & Best 2002:7; Caplan 2011:70).

2.6.3 Mentor or buddy

An opportunity for the organisations to channel excitement and encourage the creativity of employees is through the induction programme. The key component of induction, especially for inexperienced employees in this regard, is a mentor or buddy (Villani 2006:18). Some organisations use a buddy system, where an experienced worker is nominated to assist the new recruit in all the day-to-day questions that may arise. Sutherland and Canwell (2004:135) mention that it is often useful to have this person that can help with those everyday questions such as canteen facilities, introducing other co-workers, and explaining the layout of the building in the informal way that they occur. This process can also be a good way of providing a development opportunity to the person who acts as guide and mentor.

2.6.4 Health and safety specialists

Health and safety specialists can provide specialist information on topics such as health and safety, quality measures and union representation. They critically focus on the underlying mechanisms that support the establishment of specific forms of occupational health and safety in the workplace. Therefore, through contact with these individuals to facilitate the induction programme, the effort is ultimately to improve employee productivity and loyalty to the organisation (Peloyahae 2005:18).

Specialists can aid line managers by designing policies and training in conjunction with them, and monitoring their effectiveness. According to Ashtiany, Stein and Nathanson (2006:49) health and safety specialists should be involved where appropriate in the induction programme to maintain quality health and safety standards and deliver parts of

the induction programme such as health and safety rules, emergency procedures and any special hazards or requirements.

2.6.5 Other role players involved within the induction process

The involvement from top management to the bottom line, will deliver fundamental information that employees need in a proper and planned procedure. Sangale and Webster (2002:26) mention that organisations make a common mistake of leaving an induction programme to one individual. This puts a lot of pressure on that individual, therefore, the involvement of many role players splitting responsibilities makes induction more interesting. Others likely to be involved in induction include the information technology staff, peer group, colleagues doing a similar role and a colleague from other departments with whom the new employee may work with. Without support and guidance from these role players, employees can be more overwhelmed with the relations and the complexities of their work (Dube 2008:32). Within this framework, it is important to allocate time and responsibilities for specific coverage of each item of the induction programme for each employee.

2.6.6 The role of the employee – active participation

The importance of a comprehensive employee induction is to support and ensure an employee's commitment during the induction programme. All employees are required to participate actively through their induction programme. That way, employees become comfortable with asking questions to obtain the information they need to learn, problem solve and make decisions (Kempen 2010:31). Actively involved and accountable employees are more likely to receive successful induction outcomes. Their participation will suit their particular needs, and their suggestions in developing comprehensive induction programmes will help them achieve their potential (Billingsley, Carlson & Klein 2004:333).

In order to develop a structured induction programme, which meets the needs of employees, the procedures for induction are paramount. Careful attention to those procedures is needed to build a committed workforce, as employees will gain different information as per induction setting (Billingsley *et al.* 2004:333).

2.7 PROCEDURE FOR ORGANISATIONAL INDUCTION

Each organisation develops its own procedure as per its needs and requirements, which implies that there is no set model of induction (Kumar 2011a:129). Induction programmes may be structured formally or informally, or a combination of both, that take place whenever the employee is new or experiences changes in employment and work responsibilities. These programmes differ in the extent to which they provide information about the broader organisation, in addition to information about the job and the immediate work environment. Both formal and informal induction procedures are important for effective employee integration (Klein & Weaver 2000:48; Ku & Kleiner 2002:45).

Formal induction is a planned attempt to introduce new employees to the organisation, job and the working environment (Ku & Kleiner 2002:45; Kleyhans *et al* 2006:107). It gives employees a good start in the organisation by building loyalty and motivating employees. Employees may get to know history and operations, the structure, policies and procedures of the organisation, products and services the organisation is offering, location of departments and employee facilities, safety measures, and other procedures of the organisation (Banfield & Kay 2008:328; Armstrong 2009:603).

At the very beginning, new employees have numerous questions. Ardtz, Jansen and Van der Velde (2001:162) mention that the use of formal induction programmes improve the chances of gaining the new employees' loyalty at the very beginning. Consequently, the new employees will have the chance to carry out their tasks clearly, with less errors, and will fit to the organisational culture and the work group easily and effectively.

Informal induction is not planned. New employees get familiar with the work and the work environment by themselves. This induction procedure can cause a lot of stress on new employees at the very beginning due to a lack of appropriate knowledge related to the organisation. Employees are placed directly on the job by themselves, and may know the organisation by their experience (Filstad 2004:398).

The best sources of information on employee's needs are the individual employees themselves. Social interactions, conversations and team projects provide opportunities for informal progress during the initial induction, where the unwritten (and sometimes unstated) practices are often best acquired, over time, through discussions with managers and colleagues in the workplace, and then later on errors may be minimised (Nair & Nair 2001:124; Lucas, Lupton & Mathieson 2006:164).

The induction procedure an organisation might use to induct its employees is the deliberate scheduling of several meetings with the employees to introduce them to the organisation, job and the working environment. It goes into details and is spread over a couple of weeks or months in most organisations, and all the aspects of the organisation are included (Aswathappa 2005:181). It allows the stakeholders illustrated in Figure 1 to induct employees to the organisation in a formal manner.

However, through an informal induction, informal socialisation networks become more powerful in communicating information that is not presented in a formal induction processes (Filstad 2004:398; Lucas *et al.* 2006:164). It can last from a day up to some months, and is enhanced by a mentor who can act as a role model in guiding or giving new employees essential information they need (Redman & Wilkinson 2002:119). The networks, which the individual can join within the organisation, could further supplement it (Cornelius 2002:58).

Through both formal and informal interactions and discussions, newcomers can begin to understand how the organisation and department is run, who holds power and who does not, who is active within the department, how to behave in the organisation and what is expected of them. However, without overloading them with all this information at the same time, the procedures should begin with the most relevant and immediate information (departments, introduction to colleagues and job duties) and then proceed to more general information (organisational issues, policies and standards) of the organisation (Majundar 2008:12). This could be viewed as an outward spiraling approach to the formal induction efforts. Among various contents of formal induction procedures, health and safety issues are the most essential aspect to be encountered if organisations wish its employees to survive and prosper in their new work environment (Rowley & Jackson 2011:102).

2.8 HEALTH AND SAFETY AS A COMPONENT OF FORMAL INDUCTION PROGRAMME

It is vital to ensure that along with health, safety, and environmental factors, employees are fully aware of their responsibilities. Organisations should also be aware of the risks taken if their employees are not made aware of health and safety practices. Tietz (2006:13) supports this statement mentioning that, “safety is like a crocodile. All can seem to be safe while it waited quietly without any movement, except, it is patiently waiting for the right moment”. This latent risk illustrates the need to make employees aware of, and introducing them to, what is required to ensure safety practices within the work context. Therefore, all operations should be carried out with the knowledge and awareness of the risks involved and how they can be minimised. Health and safety induction ensures that health and safety rules are disseminated correctly for new employees to pick up messages and seek to follow desirable practices (Squelch 2001:210; Meyer & Kirsten 2005:50).

2.8.1 Health and safety induction

The importance of a formal induction programme lies in the fact that it gives employees a basic understanding of their environment. It has been indicated earlier in this study that

induction assists in reducing the rate of labour turnover and increases productivity (Lashley & Best 2002:13; Deb 2006:194). Also, the inclusion of health and safety as part of the induction programme may undoubtedly minimise the accident rate. For many decades, during the course of their employment, employees have been killed or seriously injured. Injuries and deaths result from unsafe and unhealthy working conditions, which remain one of the most costly factors, both personally and financially (Watson, Scott, Bishop & Turnbeaugh 2005:303).

Health and safety induction is important because of the volume of information employees need to assimilate about safety in their work environment (Akdere & Schmidt 2008:6; Steyn 2008:27). Employees, therefore, will acquire health and safety information, and practices, and be aware of potential risks that will result in unsafe situation (Kiwekite 2008:5). The aim is to change and develop positive precautions with regards to safety within organisations (Tyson & York 2009:142).

Therefore, efforts are undertaken to improve the occupational health and safety and reduce injuries and fatalities. Managements' commitment to ensure proactive attempts in alleviating the occupational health and safety situation in South Africa is vital. However, employees also need to participate actively in a safety programme, to ensure a continuous process (Vredenburg 2002:262). This implies not only the need to meet the changes in technology but also the changes in the environment within which the organisation operates. In addition, the provision of information geared through such programmes will develop employees' understanding of specific risks and hazards associated with their jobs and working environments. In turn, this will inform them about the control measures and the safety procedures that are in place for them to follow (Veldeman 2009:25).

2.8.2 The implications of health and safety training aspects during induction

Organisations that undertake regular health and safety induction have better health and safety records and better-informed employees. However, the skills of employees would

affect their responsiveness to health and safety, according to Squelch (2001:210). Therefore, varying training methods in health and safety could overcome this. The OHSA stipulates that health and safety training is a critical intervention that should be given to employees (RSA 1993b:5; Hughes & Farrett 2010:77). Neale (2003:123) mentions that prior to commencing work, each employee should receive health and safety induction training that will cover specific risks and location of hazards within that workplace. Aspects of health and safety given during induction training are the workplace rules and procedures for responding to an accident, correct safety equipment, a workplace plan showing medical facilities, and typical working signs, which should be included in the induction programme.

2.8.3 Benefits associated with health and safety induction

Adding a health and safety induction programme to the general induction programme is vitally important. Health and safety induction takes place in an organisational setting, typically in support of the skills, knowledge and the attitudes that contribute towards making employees competent in health and safety aspects of their work. It provides a greater awareness and understanding of personal responsibilities in terms of reporting unsafe acts and condition. The knowledge gained reduces the probability of accidents (Mbona 2005:42).

A critical aspect of the organisational policy that relates to safety is the recognition of hazards. Increased hazard recognition and identification of major risks (Eppenberger 2008:40) contributes to a workplace that is more profitable and sustainable. A significant feature of actions directed at accident prevention is to empower employees to take an active role in the improvement and achievement of safety performance. Consequently, employees are motivated to work safely and to protect their own and others' long-term health, not only to avoid accidents (Vassie & Lucas 2001:485; O'Toole 2004:232).

2.9 THE OCCUPATIONAL HEALTH AND SAFETY LEGISLATION AND ITS RELEVANCE TO THE WORK CONTEXT

Health and safety within the work context has been a concern for employers, employees and government alike. Induction focused on health and safety issues holds a vital link to the reduction of the number of occupational injuries, illnesses and fatalities. As a first step, this involves providing employees with information related to the accurate identification of workplace hazards and risks (Pao & Kleiner 2001:140).

Employers may use various measures to ensure a reasonably safe working place. This includes both formal and informal induction efforts (Le Roux 2011:530). Induction is a legal necessity, which requires the provision of information within this context. The obligation of employers to take appropriate steps to prevent injuries, illness and fatalities by providing information underlies the basic assumptions of the OHSA within the South African labour context (Takala 2006:3).

2.9.1 The Occupational Health and Safety legislation (OHSA) (85 of 1993)

The OHSA (RSA 1993b:1-27) covers occupational health and safety in South Africa (Takala 2006:3; Hughes & Farrett 2010:25). It forms the basis of occupational health and safety legislation, to which all organisations are obligated to abide (Bakri *et al.* 2006:21). This legislation was in response to the dangers inherent in workplaces, and aims to protect workers from potential hazards associated with the execution of their duties as employees. This imposes obligations upon employers, manufacturers, contractors and others to ensure the occupational health and safety of all who might be impacted by their activities is given the necessary priority (Browne 2006:6; Gunningham 2008:344).

Legislative reform was needed to change how organisations dealt with occupational injuries, illness and fatalities in the past. The OHSA (RSA 1993b:1-27) replaced the Machinery and Occupational Safety Act (6 of 1983) (MOSA) (Van Jaarsveld & Van Eck

2005:400) and came into operation in January 1994 (RSA 1993b:1-27; Du Plessis, Fouche & Van Wyk 2002:127).

Aiming to inspire employers and employees to take the required precautions, to encourage new and appropriate programmes for providing safe and healthy workplaces, the act assures every working person, a safe and healthy workplace (Soediono & Kleiner 2002:37; Dessler 2013:563).

2.9.2 Contextualising South African OHS Legislation

Although some types of work are generally more dangerous than others are, statutes legislated by law-making bodies regulate OHS (Swanepoel *et al.* 2008:524). These statutes usually prescribe limits, set levels and specify minimum standards of work. They are comprised of sets of rules specifying or prohibiting certain actions, and are based on the principles of good practice and continue to play an important role in health and safety legislation (Le Roux 2011:530). The statutes stipulate the guidelines on how to work safely and protect employees in the workplace from safety hazards that could lead to injuries, illnesses and fatalities (Lingard & Rowlinson 2005:35; Bernardo 2009:45). The statutes, which concern organisations, are indicated in Figure 2.

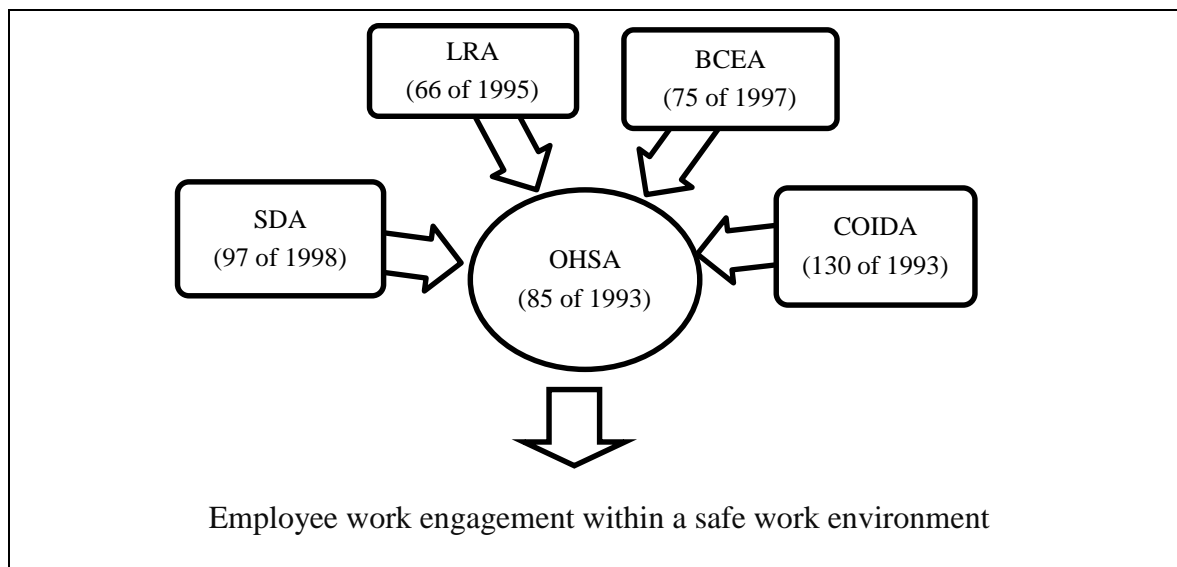


Figure 2: Health and safety within the context of employment legislation

Sources: Adapted from RSA (1993a:15); RSA (1993b:1); RSA (1995:14); RSA (1997:5); RSA (1998:6); Grogan (2014:60); Du Plessis *et al.* (2002:147); Brandt (2009:5); Bendix (2010:114).

As illustrated in Figure 2, the Occupational Health Safety Act is the main act which provides for the maintenance of health and safety standards at work, and the prevention of accidents (RSA 1993b:1; Van Jaarsveld & Van Eck 2005:400). The Basic Conditions of Employment Act (75 of 1997) lays down the minimum conditions of employment. It reflects the perceived need for protection of employees' health and safety (RSA 1997:5; Brandt 2009:5). The Labour Relations Act (66 of 1995) assures employees of safe and healthy working conditions, as it is the employer's obligation to maintain its premises in such conditions (RSA 1995:14; Grogan 2014:60). The Skills Development Act (97 of 1998) maintains that adequate training to health and safety needs to be provided to employees to equip them to perform at the prescribed level of skills (RSA 1998:6; Du Plessis *et al.* 2002:147). The Compensation for Occupational Injuries and Disease Act (130 of 1993) allows compensation to be paid to employees who suffer injury or disease as a result of their activities in the work situation (RSA 1993:15; Bendix 2010:114).

These are a set of statutes, which apply to any organisation. Employers ensure health and safety of employees based on these acts. The OHSA constitutes the most important legislation, as illustrated in Figure 2 (Wren 2008:51).

2.9.3 Scope and application of Occupational Health and Safety Act (85 of 1993)

The scope of OHSA is broad, according to Van Jaarsveld and Van Eck (2005:400). It covers persons at work, those who are exposed to hazards or occupational diseases, and those who are injured through the use of machinery or exposure to hazardous substances, even though such exposure or injury did not occur in the context of an employment relationship, but arise out of or in connection with the activities of persons at work (RSA 1993b:1-5). The act covers all persons who may be affected directly by the activities of other persons at work. Section 9 of the act is a specific direction in this regard (RSA 1993b:8-10).

Furthermore, the OHSA is applicable to all areas of employment or any premises in which employees are employed (Ngowi, Macha, Kapinga & Kapeleka 2007:8). “Any premises or place where employees perform work in the course of their employment” is deemed a workplace (RSA 1993b:6). The act is concerned with the protection of safety, health and welfare of employees engaged in work and those who are affected by the workplace. Therefore, the aim is to seek and foster safe workplaces free from injuries and fatalities, and to create an environment of participation between employers and the workforce, where the collaborative agreement is aimed at the prevention of unhealthy and unsafe working environments (Casio 2006:587). These statutory duties, therefore, have implications for both employers and employees (RSA 1993b:8-10; Van Onsellin 2006:6).

2.10 THE STATUTORY DUTIES OF ROLE PLAYERS WITHIN THE CONTEXT OF OHSA

Human existence has been characterised by a variety of working conditions through the ages. Although varying degrees of illness, injuries and fatalities have been associated with different kinds of work, a safe workplace is central to every employee's ability to enjoy their workplace (Soedione & Kleiner 2002:37).

The employer is held with the majority of obligations pertaining to health and safety. Section 7 of the OHSA (RSA 1993b:8-10) spells out the duties of both employers and employees who are also obligated to commit to health and safety within the workplace.

2.10.1 Legal duties imposed upon employers within the context of the OHSA

The OHSA lays down the general duties for the employers in Section 7 of the act (RSA 1993b:8-10). It specifies that "everyone who undertakes, or has authority to direct how another person perform work, is under a legal duty to take all reasonable steps to prevent bodily harm arising from that work" (RSA 1993b:8). In the South African context, the act makes it obligatory for employers to ensure the safety of persons at work. This implies that employers have to maintain, as far as reasonably practicable, safe working environments free from risks to the health and safety of employees (Labuschagne 2001:38).

Taking good care of an organisation's employees goes beyond simply keeping within the requirements of OHSA (Vessie 2000:541). Practical and positive health and safety training is required to stimulate, enhance and maintain optimal states of employees' health and safety in this context. Section 7(e) of the act (RSA 1993b:8) specifically supports this statement that provision of information, instruction and training is necessary to ensure employees' health and safety at work. Health and safety training, therefore, can be viewed as the catalyst, which will inform employees about the dangers, and how to prevent and eliminate those dangers, thereby proactively providing protective measures. Thus,

employers are lawfully responsible for matters over which they have reasonable control. This makes providing a safe workplace a core responsibility of employers (Della-Giustina 2000:26; Greeth-Rothmann 2004:126; Kiwekite 2008:5; Goetsch 2010:73). Moreover, the employers' duty extends to the situation where they need to identify potential hazards, prevent employees from any exposure to those hazards and enforce all necessary control measures. These direct duties ensure the basic principles of safety responsibilities of the employers (Cooper 1998:357). By doing so, they ensure that precautionary measures are implemented and maintained, thereby limiting risks and hazards to a minimum (RSA 1993b:10).

Legislation, therefore, provides the departure point when it comes to promoting and maintaining employees' health and safety in the workplace. It is argued that if the requirements of OHSa are applied and maintained, the risk of accidents in the workplace would be reduced (Swanepoel *et al.* 2008:542).

2.10.2 Employee's responsibilities within the context of the OHSa

Although the safety of the employees rests mainly on the employers, health and safety legislation imposes duties on the employees as well. They are also expected to take reasonable care not to endanger themselves (Joyston-Bechal, Grice, Fink & Dering 2004:4). Therefore, the health and safety obligations of employees must be taken into account when considering the notion of a safe workplace. OHSa stipulates that employees should be involved in health and safety issues and decisions (Section 13 of the act) (RSA 1993b:10). Employees, therefore, need to act in due care for themselves and others to carry out all valid instructions in the interests of safety, and to eliminate or control hazards or risks arising in the course of carrying out their work. They should take adequate precautions, in cooperation with their employer, to protect themselves and other workers against hazards or risks to health and safety (Acutt & Hatting 2011:53).

Employees have to bring to the attention of their immediate supervisor or health and safety representative any unusual conditions at the workplace, which they believe could present a hazard or risk to their safety or health or that of other people, and which they cannot deal with effectively themselves. However, if they are involved in any incident affecting their health, or are injured while performing their duties, the OHSA provides that they remove themselves from the hazardous situation and report the incident as soon as possible to their immediate supervisor (RSA 1993b:10-11). Employees, therefore, have to take reasonable care when carrying out lawful orders given, and obey health and safety rules and procedures laid down by their employers.

In addition, employees have to cooperate with the employer and other employees to achieve compliance with the duties and responsibilities placed on the employer. When they observe noncompliance with health and safety regulations or codes of practice by any person, they should take corrective action immediately. If such action is unsuccessful, the problem should be referred to a higher level of management immediately. Employees also have a duty, in accordance with their training, and the instructions and means given by their employers, to comply with prescribed occupational health and safety measures. Moreover, they should participate in instruction and training programmes provided by the employer, and should demonstrate such acquired knowledge and understanding of health and safety measures on the job (RSA 1993b:11; DeJoy, Schaffer, Wilson, Vandenberg & Butts 2004:85).

2.11 UNDERSTANDING THE MANAGEMENT OF HEALTH AND SAFETY

Occupational health and safety affects all aspects of work. The requirement to maintain a safe and healthy workplace necessitates an effective management system to monitor the conditions in the workplace (Hughes & Farrett 2010:2). It forms an essential part of the employer's responsibility, which sets out a clear direction for employees to follow in terms of health and safety.

The successful management of health and safety should be a top priority in organisations and throughout the workplace. This leads to hazards, risks and fatalities being reduced, eliminated and controlled through the effective management of health and safety systems. According to Flynn and Shaw (2008:4-12) occupational health and safety management systems are generally based on a plan, check, act, and review style of management.

2.11.1 The Occupational Health and Safety Management System (OHSMS)

To minimise unnecessary risks and hazards to promote healthy and safe workplaces, a systematic approach is needed. OHSMS is an essential tool for the achievement and continual improvement of health and safety of employees in an organisation (Chaturvedi 2007:245). Hazards are a common source of health and safety problems; the identification of these hazards and their resultant control measures provides the foundation for this management system. Reduction in the incidence of occupational health and safety is sought by adopting a systematic management approach. The management systems accurately capture the health and safety needs and control the process by preventing and creating an enabling environment. This ensures full understanding of potential hazards by applying and coordinating appropriate prevention and control strategies (Geminiani 2008:58, Makin & Winders 2008:953). The identification of hazards, the planning and monitoring of preventative measures and integrating health and safety related criteria into routine work and decision-making at all levels of the organisation is implied. To ensure this, it is useful to have a standard system for setting up a healthy and safe organisation, and for monitoring its effectiveness. Thus, OHSMS is improved through a continuous cycle of policy review, evaluation and action for improvement (Abdullah, Spickett, Rumchev & Dhaliwal 2009:55).

OHSMS typically includes the implementation of sequential activities, which include policy management, and plan, check, act, and review style of management as illustrated in Figure 3. The focus is on how to enhance the approach to managing health and safety. An OHSMS implemented in conformance with health and safety standards can help

organisations minimise workplace hazards and reduce the occurrence of risks and incidents as a set of plans, actions and procedures to systematically manage health and safety in the workplace (Chaturvedi 2007:247).

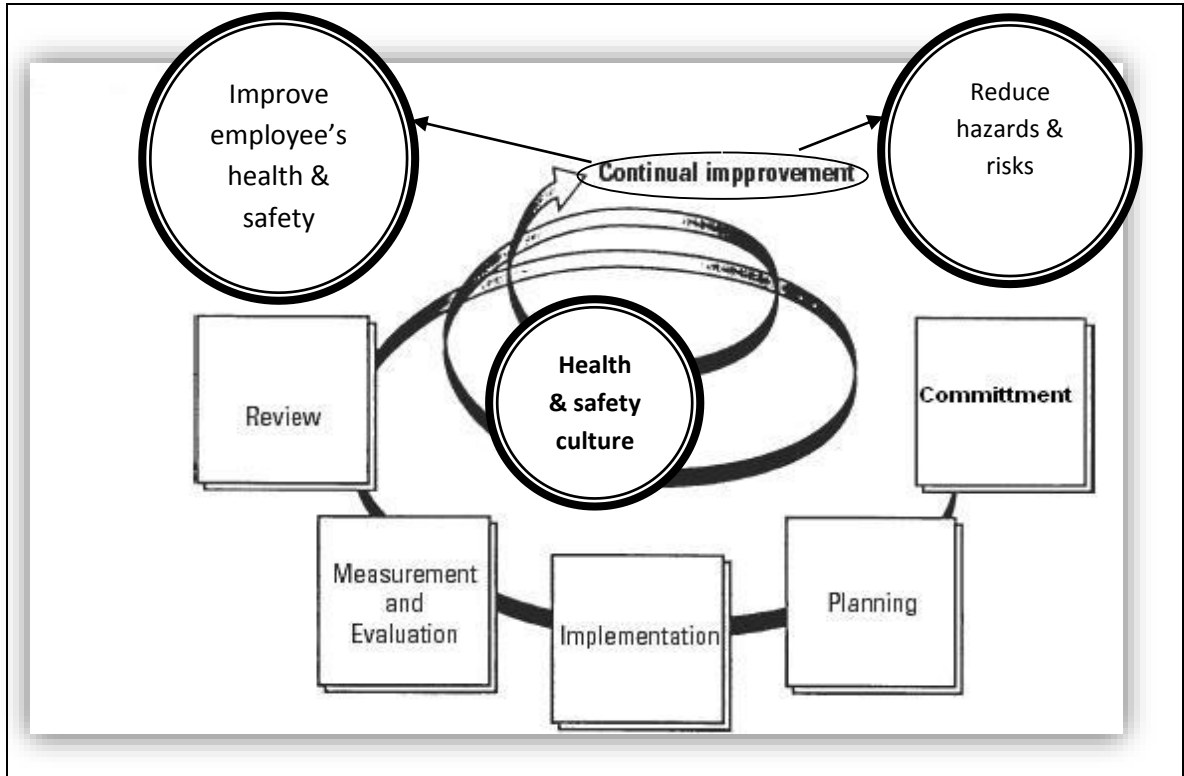


Figure 3: An OHSMS cycle

Sources: Adapted from Ah Kim (2004:90); Lingard & Rowlinson (2005:127); Flynn & Shaw (2008:4); Prezant, Weeks & Miller (2008:5).

Figure 3 illustrates the cyclical nature of an OHSMS cycle. It presents an important development of OHSMS as the organisation would have a means by which employee's health and safety can be improved continually. With the attention given to OHSMS activities, it can be argued that the elements are essential to determine its effectiveness (Lingard & Rowlinson 2005:127).

Characteristics of this typical OHSMS cycle, as depicted in Figure 3, indicate that its elements are connected through a health and safety culture. The implementation in this regard requires that the OHSMS be connected to, or related to health and safety in the organisation. This means the occupational health and safety issues and aspects of the OHSMS will be part of the organisational culture (Redinger & Levine 2004:4). Therefore, health and safety will be an important value expressed by management and employees alike.

Continual improvement in the OHSMS is a key and central concept in the plan-do-check-act cycle. It improve the OHSMS to achieve enhancement in its overall performance through continuing reviews of appropriate health and safety measures that are in line with the organisation's health and safety policy (Hughes & Farrett 2010:20). The notion embodied in this concept is that organisations continually seek to improve employee's health and safety, decrease risks and incidents as illustrated in Figure 3.

2.11.2 Elements of an OHSMS

All recognised OHSM systems have some basic and common elements. Their similar approach revolve around the establishment of standards for health and safety based on risks assessment and legal requirements through planning, which is implemented to achieve objectives and standards (Lingard & Rowlinson 2005:128).

These elements include procedures to monitor, measure, and record health and safety performance on a regular basis that should be developed, established and periodically reviewed. However, the origin and underlying causes of work-related injuries, ill health, diseases and incidents should be investigated. Identified and corrective actions resulting from such investigations are implemented to avoid reoccurrence. Periodic audits should be conducted in order to determine whether management systems and its elements are in place, adequate and effective in protecting the safety and health of workers (Jansen & Brent 2005:720).

Although these elements provide the basis for improvement of health and safety performance, behaviour, and awareness, the systems will fail unless there is a positive culture that appreciates safety as one of the most important values. Management systems that reflect a health and safety culture demonstrate flexibility to change along with the organisation (Karmis 2001:31; Cheyne, Oliver, Thomas & Cox 2002:651).

2.12 THE IMPORTANCE OF HEALTH AND SAFETY CULTURE IN AN ORGANISATION

Culture has been defined as the values, beliefs and behaviours that employees share with others that help define them in an organisation (Flannery 2001:4-5). Health and safety culture is the product of individual and group values, attitudes, competencies, and patterns of behaviour that determine the commitment to the organisations' health and safety programmes. Organisations with a positive health and safety culture are characterised by the perceptions of the importance of health and safety (Cox 2007:7; Steyn 2008:53).

It is recognised increasingly that behaviour, attitudes and beliefs, in short, culture, is a critical element of health and safety. Health and safety culture has been found to be important across a wide variety of organisations. Health and safety culture has also been associated with employees' safety-related behaviour in organisations (Neal & Griffin 2002:27; Cooper & Phillips 2004:520). Poor health and safety culture will encourage an atmosphere of non-compliance to safe operating practices, with a good safety culture being associated with lower injuries (Schein 1999:3; Rundmo 2000:48).

Health and safety culture may not be the only determinant of safety in organisations but it plays a substantial role in encouraging people to behave safely. However, accidents are likely to be most common in organisations where there are unspoken attitudes and beliefs relating to health and safety. Health and safety culture appears to predict on-the-job injury and accident rates (Mearns & Flin 1999:9). Investigations into major accidents have also

found that a poor safety culture is a key contributor to unsafe acts, accidents and fatalities (Taylor 2010:12). It is thought that the health and safety culture affect employees' perceptions, one of the key factors influencing safe and unsafe behavior. In order to understand health and safety outcomes better, within the context of this study, employees' perceptions have the potential to shape their behaviour in respect of issues related to health and safety. This implies that the health and safety culture often guides the activities of groups and organisations. According to this perspective, people do not shape their culture; rather their culture shapes them in often unpredictable and unforeseeable ways. Therefore, culture shapes perceptions (Weigmann, Von Thaden & Gobbons 2007:4).

2.13 PERCEPTION AND ITS RELATED CONCEPTS

All behaviour in the work context involves interaction between the employee and the situation. Safe or unsafe behaviour in the workplace is influenced further by the employee's perceptions of the situation (Flin, Conner & Bryden 2000:178; Jansen & Brent 2005:721; Che Hassan, Basha & Wan Hanafi 2007:272). Moreover, events in the surrounding environment strongly influences the way they generally behave based on their perceptions of the situation (Hellriegel & Slocum 2009:48).

Research done by Gyekye (2005:292); Chan, Woon and Kankanhalli (2006:9); Ryan (2007:32); Nasab, Ghofranipour, Kazemnejad, Khavanni and Tavakoli (2008:168); and Pooy (2008:12) show that the employee perception of the situation influences issues related to human factors, organisational factors and job factors. Brown *et al.* (2003:150) is of the view that unsafe work practices are attributed to human behavior. Choudry and Fang (2008:569) mention that human behaviour involves perceptions, which is the set of processes by which an individual becomes aware of and interprets information about the environment. This process is whereby employees take information from the environment and make sense of that environment. Perception is a major driving force in shaping employees behaviour, the impressions, and daily life experience (DuBrin 2002:45; Huczynski & Buchanan 2007:209).

According to Venter (2009:2), employees generally believe in what they see and tend to perceive it to be true. They attach meanings to their experiences and the way they perceive any given situation is unique. A situation may be the same but the interpretation of that situation by two employees may be greatly different. However, perception is not always consistent with reality, that is, it is not an exact recording of the event or the situation (Randlov & Alstrom 2000:561; Hodges & Hegar 2005:78; Simelane 2007:30).

Perceptions also shape employees' motivation, attitudes and behaviour, which in turn impact their response. An example of this is employees who truly believe their employer is not committed to health and safety, their perceptions will have a strong influence on their behaviour, and therefore, give rise to patterns of behaviour that have implications for placing employees at a certain point of view with regard to health and safety (Naidu 2007:43). Acknowledging that, employees differ in their thoughts and the way they look at things, their frame of reference is made up of all previously-held experiences, beliefs and feelings, and thus, they select senses to which they will attend the risk, arrange information about the risk, and attach meanings based on their needs and self-concept to understand it (Viljoen 2003:4; Greenberg & Baron 2005:55). Therefore, it is through perceptual processes that employees will in fact act or respond in accordance with the way they perceive involving feelings and actions. Thus, the perceptions regarding an employee's actions often are influenced significantly by the assumptions they make (Feldman 2001:44).

2.13.1 Perceptual development process

The process of perception puts employees in a position to obtain knowledge and be aware of their environment. The way in which employees select, organise and interpret their perceptions to make sense of their environment is not something employers should ignore, because it is the reason why employees behave the way they do (Clarke 2002:186). The perceptual process is depicted in the Figure 4.

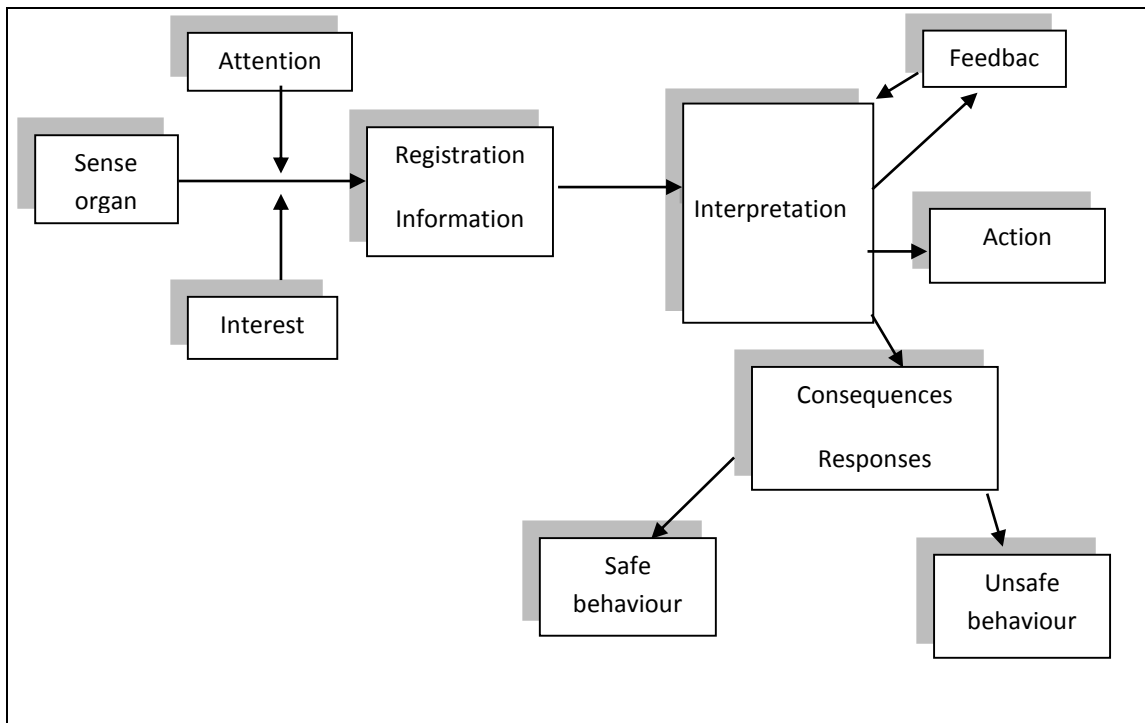


Figure 4: Employee's perceptual process

Sources: Adapted from Kreitner & Kinicki (2006:156); Mukherjee (2009:104); Goldstein (2010:6); Solomon (2011:49).

Perceptions are found to affect various functions in an organisation strongly (Schermerhorn 2011:57). The perceptual development process model illustrates the basic processes involved in an employee's perception. The development of perception is impacted upon by stimulus, attention and registration through the senses, interpretation, feedback, action and consequence. The stimuli enter the process of registration, which stimulates their interest (Mukherjee 2009:104).

Employees form perceptions from information (hazards/risks) received through their senses. They process this information by selectively paying attention to some aspects of the hazards and or risks, ignoring other aspects, then organising selected information and interpreting it into meaningful patterns. Therefore, the personal meaning the employees

attach to the information based on their previous experiences, beliefs, and feeling, creates perceptions, and finally, a response follows (Hellriegel & Slocum 2009:69). A favourable perception of hazards/risks could lead to a decision of acceptable safe behaviour as illustrated in Figure 4.

How employees perceive the risks/hazards they are exposed to while conducting their work may contribute to an understanding of risks/hazards, and thereby, to the health and safety of their working conditions (Rundmo 2000:198). Biased perceptions could cause misjudgments. When this occurs, it may cause unsafe behaviour, inappropriate actions and decisions with regard to health and safety.

2.13.2 Factors influencing perceptions

An employee's perception experiences involve the recognition of environment and actions in response. It can be influenced by occupational choices as well as demand for health and safety (Robbins 2001:122). Leoni (2010:166) mentions functional factors that operate to shape employees impressions as are related to the perceiver, the object or target being perceived and the context of the situation in which the perception is made.

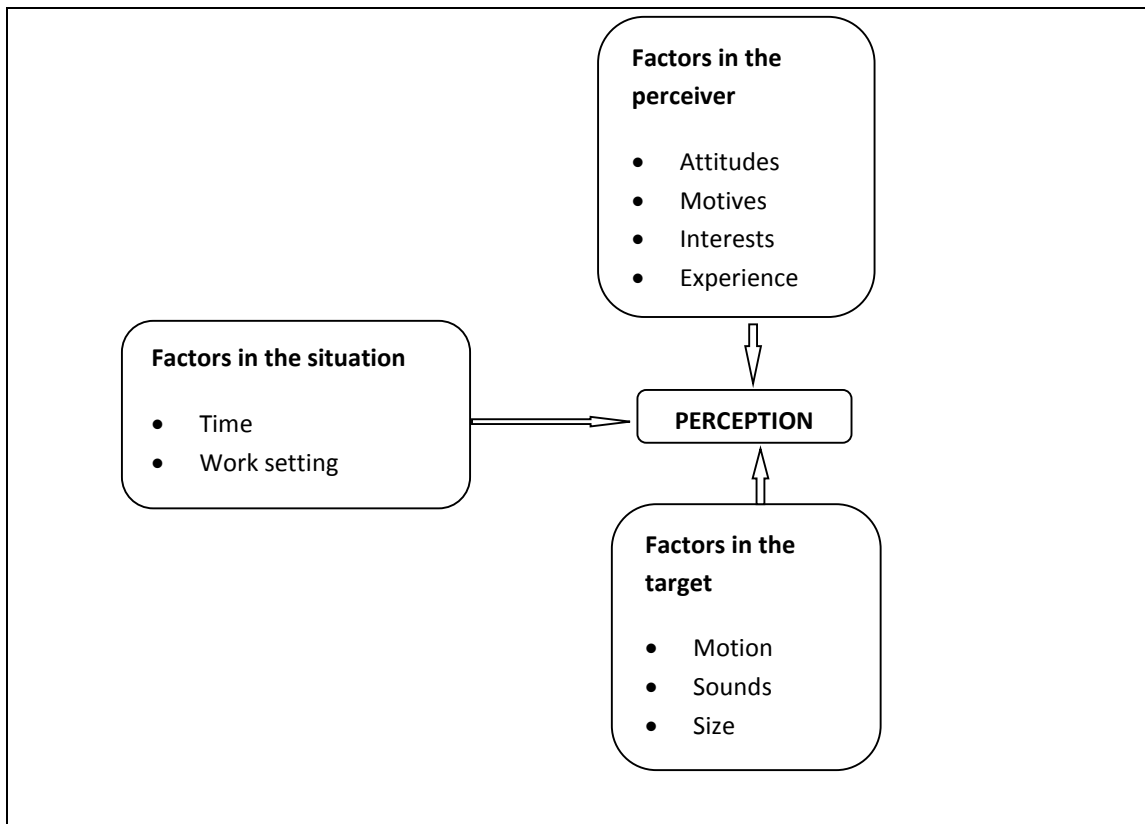


Figure 5: Factors influencing perception

Sources: Adapted from Gilbert, Pelham & Krull (2000:3); Palmer & O’Neil (2003:257); Schermerhorn, Hunt & Osborn (2004:35); Sekeran (2004:52); Bergh & Theron (2006:124); Champoux (2006:102)

Through the perceptual process, employees gain information about the elements of the environment that are critical for them. These elements, depicted in Figure 5, could help in shaping the perception of individuals, and they could distort their perceptions as well (Leoni 2010:166).

2.13.2.1 The perceiver’s past experience

The individual’s experiences and knowledge, or things that can be related to it, influence an employee’s perception of something. The employee’s perception will most often be

relative to previous experience and personal analytical abilities. It thus depends on the perceiver's expectations and previous knowledge as well as the information available that relates to the stimulus itself. Past experience has a bearing upon how individuals feel. Attitudes, motives and interest from past situations and personal traits determine how employees perceive something, and therefore, influence what employees perceive in future situation (Palmer & O'Neil 2003:257).

2.13.2.2 The characteristics of the target being observed

The characteristics of the target that is being observed also affect perception. A prerequisite of perception is attention, and it has been found that there is a tendency to give more attention to stimuli, which are large, moving, intense, loud, bright, repeated, and stands out from the background (Schermerhorn *et al.* 2004:35). Employees interpret what they see based on the target. Naturally, there is a chance that important cues may be missed in the perception process. Therefore, employees will select information in a way that allows them to separate even a weak voice in a noisy environment, depending upon what holds their attention (Bergh & Theron 2006:124).

2.13.2.3 The situation within which the interaction takes place

The situation in which the interaction between the perceiver and the target takes place influences the perceiver's impression of the target. The context in which employees see the object and the element that surrounds the environment also influences perceptions, which is the location, time and any situational factors at which an object is seen. The strength of the situational indications also affects perception. Some situations provide strong signs as to appropriate behaviour (Sekeran 2004:52). In these situations, the individual's behaviour can be accounted for by the situation. However, neither the perceiver nor the target (object) has changed; the situation is different and becomes the basis for the behaviour. Therefore, seeing an object in a given situation can raise expectations about the behaviour that the situation could cause (Champoux 2006:102).

Employees are continuously in contact with their environment by means of their perception. Perceptions are important for employees' survival since they must react to dangers and risks from the environment. However, perception can affect an employee's working relationship in many ways related to the organisation. Based on the perceiver, target and situation explained above, existing employees might have the perception that new employees are not good at their job, no matter the induction, and they may tend to avoid involvement with them or working with them in the fear that they will be exposed to occupational hazards and risks. In doing so, it affects their working relationship with new employees, and alternatively, the effectiveness and efficiency of the organisation.

In the work situation, most accidents occur because the employee failed to observe certain hazards, and consequently could not react to these. It is essential for employees to be aware of the factors that may affect their perception, and therefore observe their environment in order to do their work safely (Daft & Lane 2007:112; Kruger, Smit & Le Roux 2005:105).

2.14 EXPLORING THE INTERACTION BETWEEN PERCEPTION AND RESULTANT ACTIONS

Employees have a remarkable ability to interact with objects or situations in their work context. Although their perceptions in the environment guide their interactions with those objects, the processing of object features for perception and action is quite different. Despite this, there are interactions between perception and actions. It is only through perceptual information that employees can guide their actions prospectively. Perception specifies the current status of the environment in which it is embedded, thereby giving employees access to the current constraints on their action (Grandy & Westwood 2006:3887).

Perception allows an employee's actions to be planned prospectively and gears actions to the environment. Perception of health and safety at work mediates related behaviours and

outcomes (Neal & Griffin 2002:32). If employees have a strong impression about health and safety, that belief might lead them to dismiss any contrary evidence against their initial belief about health and safety. The attributions employees make for their own actions towards health and safety also influence their perceptions in the organisation. For example, successful employees who succeed at tasks after completing an induction programme usually increase their confidence levels (DeJoy *et al.* 2004:65). Understanding how employees perceive health and safety is vital within an organisation to recognise resultant actions of employees.

Employees' attitudes and perceptions help to drive behaviour. This leads them either to avoid or engage in health and safety matters. The association between perception, unsafe behaviour and injury experience may exert an influence on health and safety awareness. Employees can be engaged in unsafe behavior because of their perceptions. When the realities of health and safety are misjudged, it may cause unsafe behaviour and inappropriate actions towards health and safety compliance, inappropriate decisions with regard to health and safety measures, and occupational accidents. Unsafe behaviour includes the extent to which employees ignore health and safety regulations in order to get a job done. However, when an employee feels unsafe, this may cause work overload and strain, which enhances the probability of accidents happening (O'Toole 2004:31).

It can be difficult to change perceptions, but when employees believe safety is indeed a shared organisational value, they contribute extra effort to safety improvement initiatives, and they are less likely to withstand the enforced pressure to avoid safe work practices. Employees react to their actions and decisions according to their perceptions; therefore, the employees' actions are influenced by their own perceptions of health and safety. Accurate perception allows employees to interpret what they see and hear in the workplace effectively to make decisions, complete tasks and act in an ethical manner. Positive perceptions help to improve employees' overall health and safety. A very valuable tool is employees changing their perspectives to ones that are more positive, and it helps them

understand situations more realistically. Thus, they need to be aware of what is going on inside and around themselves in their working environment (Nelson & Quick 2012:8)

2.15 CONTEXTUALISING HEALTH AND SAFETY INDUCTION AT ARCELORMITTAL (Vanderbijlpark works)

Employees are regarded as the strength of ArcelorMittal. Consistent performance levels are expected from them. In return for their dedication and commitment, Mr Mittal, Chairman and CEO of ArcelorMittal (2012a:1), believes that ArcelorMittal offers a challenging and fulfilling work environment focused on employees' career progression.

2.15.1 ArcelorMittal's induction process

The retention of high quality employees and their development through comprehensive organisational planning remains the cornerstone of ArcelorMittal (ArcelorMittal 2012d:35). The on-boarding programme, as it is called at ArcelorMittal, is designed to support the integration of new employees into ArcelorMittal's environment and enable them to maximise their contribution to the performance of their team, and business unit, and to support the realisation of the group's objectives, business plan and strategy. It is further designed for employees to feel part of their team and be safe and challenged in their working environment, to accelerate their understanding of their team and individual accountabilities and to maximise their contribution to their team's performance (ArcelorMittal 2012d:8).

ArcelorMittal's induction policy (ArcelorMittal 2012c:8) defines induction as "a programme of planned activities which commences from when a candidate accepts a job offer until the end of six months of employment or any pre-determined period of time". This programme is implemented and performed in accordance with the OHS Act (RSA 1993b:6). The programme comprises three elements, which focus first on the global content, which is consistent across all geographies and business units, and focuses on ArcelorMittal's vision, mission, values and business strategy, secondly, the local content,

which is tailored to the segment, business unit, local team's mission, goals and plants, and finally the industrial content, which is based on individual job requirements, including performance and development plans (ArcelorMittal 2012c:6).

New employees are obligated to undergo all elements of ArcelorMittal's on-boarding programme. The human resource function on the on-boarding programme leads its own programme and is accountable for deployment within its perimeters. The local human resource department is accountable for ensuring that the programme is used each time a new person joins the organisation. The line manager is held responsible for ensuring that all the tasks in the induction programme are conducted, either by direct action or by delegation. Ultimately, the new employee is held accountable for managing his/her own induction activities, ensuring that they complete any induction activities and submitting a completed checklist to human resources at the end of the first six months of employment (ArcelorMittal 2012e:8).

2.15.2 The effective induction programme at ArcelorMittal (the on-boarding programme)

ArcelorMittal has developed an induction programme to help its employees to be welcomed and rapidly to become a contributing member of their new team. Kumar (2011a:129) mentioned that each organisation develops its own induction procedure. According to ArcelorMittal (2012d:5), ArcelorMittal has a standard form of procedure and activities as per its needs and requirements. It is expected that every employee of ArcelorMittal go through these induction activities as an opportunity to establish clear foundations and expectations in the work context.

2.15.2.1 Familiarising new employees with the organisation's environment

The induction programme helps employees to understand the ArcelorMittal's vision, mission, values and business strategy (ArcelorMittal 2012d:6-7). It is important for employees to understand the business context and company goals. A structured checklist

is designed to help employees to manage making the right contacts and obtaining the information and resources they need to be effective in their different roles. The induction checklist outlines the basic stages in the induction process and can be adapted to meet the specific requirements.

The induction activities assist employees rapidly to take the lead in structuring their induction so that they cover the items in an order that makes most sense for them and their roles. During the first week, the human resource department provides new employees with the activities that are relevant to job context. In the second week, the welcome package is finalised for individual employees, including the job description, benefits, work hours, identification card and access cards. In the second week, an employee's first contact with the works manager and the plant manager are also initiated. In the third week of employment, human resource support services are identified to employees, including the role players. Lastly, during the fourth week, the on-boarding programme of an employee is finalised (ArcelorMittal 2012d:7, 58-59, 60-61).

The induction programme lasts six months. During the induction period, phased introduction to the duties of the post, discrete areas of related duties and any associated health and safety aspects are covered. The Vanderbijlpark works health and safety induction activities are also covered in the first week where the health and safety video and test are provided. Specific aspects of health and safety covered in the ArcelorMittal induction programme are listed below, as stipulated in the ArcelorMittal on-boarding process (ArcelorMittal 2012:7, 54-55, 58-59):

- Health and safety policy
- Health and safety legislation
- Hazards and risks in the workplace
- Accidents and hazards reporting
- Safe work practices

- Personal protective equipment
- Emergency procedures
- First aid and other emergency contacts.

At the end of the six months since joining the organisation, employees should discuss their progress with their manager and identify any subsequent actions that needed to be taken. The employee is held further responsible for ensuring that the local human resource manager receives the completed induction checklist.

2.15.2.2 The feedback loop

ArcelorMittal employees are allowed an opportunity to provide feedback on their induction at the end of the induction programme. They are required to complete a survey, which will enable continuous improvement principles to be applied. This allows the local HR manager to take a lead in ensuring they know what is required in relation to the company structure, the brand strategy, the products, the customers and its key figures. According to ArcelorMittal (2012d:9) the six-month induction programme is an eventful and exciting experience, combining face-to-face meetings and site visits with interactive tools. This integration is further supported by a buddy who is assigned to an employee in the first week of the on-boarding process. The buddy will answer everyday questions and introduce them to the rest of the team.

ArcelorMittal's core philosophy is to produce safe, sustainable steel. The organisation, therefore, upholds the health and safety of its employees in the workplace as a priority. It provides an occupational health and safety policy that reflects the company's shared vision, commitment, direction and intentions, with a proactive stance to be the world's safest steel company. It works to ensure a systematic application of its fatality prevention standards across the group, to adopt a proactive approach to preventative work, focusing on advance indicators of safety issues, based on a proper health and safety management system (ArcelorMittal 2012b:56).

An important way of maintaining good health and safety in the workplace requires the involvement and commitment of everyone working for the organisation all the time. For the organisation to attempt to comply with the legal requirements, it has to structure the occupational health and safety policy in a sequence that follows patterns similar to the OHSA. With the objective to inculcate in the workers a clear understanding of the general health and safety rules, participation, and instilling the ability to demonstrate a lucid understanding of the health and safety rules is important. These, therefore, allow employees to competently identify the safety signs and demonstrate the correct desired safety response in times of emergency (ArcelorMittal 2012c:1, 3-4, 6, 8).

2.16 SUMMARY

Employees derive perceptions from their induction process. Prospective employees, once recruited, receive information from their employer. Once hired, co-workers and supervisors also contribute by describing the way of doing things, and their view of the obligations that exist between employees and the employer. Co-workers and supervisors behaviour, in accordance with health and safety, play a major role in the creation of new employees' perception towards their work environment.

The way in which employees select, organise and interpret their stimuli to make sense of their environment is not something employers can ignore. The nature of employees' perceptions is influenced by the organisation and the relationships they have with their employees (Parzefall & Coyle-Shapiro 2011:13). The perception of the employee of safety in the work environment has an important influence on safe behavior and task performance (Wang, Hensher & Ton 2002:253).

Perception can reveal factors that influence actions, and once identified, behaviour can be managed and influenced. Management actions, attitudes and behaviour towards health and

safety are defined in the perceptions of employees (Mullen 2004:281; Veltri, Pagell, Behm & Das 2007:8).

It is believed that ArcelorMittal offers a challenging and fulfilling work environment, therefore, it tailored its induction programme to meet its needs and those of the employee. Moreover, enhancing the health and safety of employees is its priority during its induction process. For this purpose, a proactive health and safety policy statement is put in place, and reflects the company's shared vision, commitment, direction and intentions, and shapes the induction process

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 INTRODUCTION

Chapter 3 provides an outline of the research methodology used to determine employees' perceptions of the effectiveness of health and safety induction at ArcelorMittal (Vanderbijlpark works). The rationale behind the research methodology is to describe the research investigation and the critical details in executing a meaningful and accurate report on this study.

In essence, Chapter 3 outlines the research objectives. The research methodology, research design, sampling strategy, including the target population, sampling frame and sampling method were highlighted. The method of data collection, the pilot study as well as validity and reliability of the research instrument were addressed. Finally, data analysis was highlighted and research ethics pertaining to the study were mentioned.

3.2 RESEARCH OBJECTIVES

The empirical objectives stipulated below summarise what was achieved by this study. They were related closely to the research problem and were formulated to facilitate the development of research methodology (Blaikie 2011:10).

3.2.1 Empirical objectives

- To determine employees' experiences of induction programmes they received at ArcelorMittal (Vanderbijlpark works)
- To gauge the effectiveness of induction programmes employees received at different stages at ArcelorMittal (Vanderbijlpark works)
- To establish the extent of health and safety induction training received by employees at ArcelorMittal (Vanderbijlpark works)
- To measure the effectiveness of health and safety induction undergone by employees at ArcelorMittal (Vanderbijlpark works)

3.2 RESEARCH APPROACH

The choice of methodology drives the researcher in the right track that helps to orient the collection, analysis, interpretation and utilisation of data. From the onset of selecting the topic, research objective guided the research methodology, which holds the key to finding the possible solution to the problems (Khazonde 2007:7). The entire research plan was based on the concept of methodological alignment.

This section of research methodology summarises various research activities that were undertaken to achieve the research objectives of the study. It enabled the researcher to anticipate the appropriate direction of what was to happen in this study and followed the outlined procedure below.

3.2.1 Research design

It is important to consider a set of guidelines and instructions to be followed in addressing the research problem (Burns & Bush 2006:202). Sobh and Perry (2006:1194); Creswell and Plano Clark (2011:75) consider a research design as the structure of the research which directs the research strategy by defining an action plan proceeding from the research question to the conclusion. Generally, research design is the overall configuration of the research, including specifying what kinds of evidence will be gathered, and from where and how such evidence will be interpreted, that provides answers to the research questions (Walliman 2006:42).

This study is situated within the quantitative paradigm. A quantitative design which involved the use of a questionnaire as data collection method was employed. Brynard and Hanekom (2006:37) explain that quantitative research requires methods such as surveys to describe and explain phenomena. Survey designs are procedures in quantitative research in which researcher administer a survey to a sample, or to the entire population.

Quantitative survey design used in this study permitted the general involvement of drawing primary data from a large number of respondents.

The researcher explained phenomena by collecting numerical data that were analysed using mathematically based methods. This quantitative study applied some form of statistical analysis based on scientific method that quantifies relationships between variables and thereby ensures objectivity (Tustin, Lighthelm, Martins & Van Wyk 2005:387; Cooper & Schindler 2006:216; Malhotra 2010:143). Moreover, it is based on the measurable practical data that emanate from the application of structured questions where conclusions will be drawn from the analysis of items clearly measured (Collins & Hussey 2003:47; Shiu, Hair, Bush & Ortinau 2009:170).

3.2.2 Target population

It is considered important to have a precise description of the elements of interest that will form the focus of this study. These elements are an aggregate or totality of all subjects that conform to a set of specification (Balnaves & Caputi 2001:91; Alreck & Settle 2004:55). These specifications provide clear guidance as to which elements are to be included and which are to be excluded (Brown 2006:66; Burns & Bush 2006:102; Spata 2003:13). To achieve the main objective, ArcelorMittal (Vanderbijlpark works) was identified as the target population for this study.

On the African continent, ArcelorMittal produces a capacity of 10 million tons of liquid steel per annum, making it one of the largest steel producers (Nortje & Mattheus 2011:11). With operations in various countries across the globe, it has a wide range of products. ArcelorMittal South Africa (Vanderbijlpark works) is one of the world's largest inland steel mills and the largest supplier of flat steel products in sub-Saharan Africa (South African Iron & Steel Institute 2012:1). It is situated within the larger Sedibeng District Municipality (Municipal Demarcation Board 2012:1). Vanderbijlpark works was

pronounced to have 8713 employees within its different departments and divisions (Bruwer 2009; ArcelorMittal Annual Report 2013:40).

The employees of the iron-making division were selected to be the element of focus for this study. An important aspect, which was considered in selecting this division was due to the high TIFR, that is, it has a higher accidents rate than other divisions. This division has a total number of approximately 634 employees (Sustainability Report 2009:17; ArcelorMittal 2013:1). ArcelorMittal statistics ratio (2012g:1) proves this division to have total injuries of 18 percent (cumulative/per year) incurred, 34.27 percent (per year) TIFR, and its TIFR frequency per month indicates 29.01 percent higher than other divisions. As ArcelorMittal statistics ratio (2012g:1) proves this division to be high in TIFR, this makes it most appropriate for the study in determining the employees' perceptions of the effectiveness of health and safety induction.

3.3.3 Sample frame

The sampling frame is commonly prepared in the form of a physical list of population. A sampling frame is a complete and correct list of population members only, and is regarded as the list of elements from which the sample is actually drawn (Malhotra 2010:359). Cooper and Schindler (2001:188) further noted that the sample frame is a list of all eligible sampling units related to the population. In this study, a list of all eligible sampling units from a defined target population was assembled. The sampling frame for this study comprised of the Sustainability Report (2009:17) and ArcelorMittal statistics ratio (2012g:1), and both affirmed the division to employ 634 employees.

3.3.4 Sampling

Sampling is conducted in order to permit the detailed study of part, rather than the whole, of a population. Sampling implies the collection of data from a representative sample of the population, which involves units that a researcher is going to analyse to help answer the research questions (Bickman & Rog 2009:78).

A simple random sampling, which implies that there is an equal probability of selection of all elements in the population, was used to help ensure an unbiased sample population (Fowler 2009:19; Babbie 2013:228). In this method, a total number of 634 employees in the iron-making division was considered, each having the same probability of being selected as part of the sample.

In order to select a sample (n) of employees from this population of 634 employees, researcher chose to use a simple random sample. With simple random sampling, there is an equal chance that each of the 634 employees will be selected for inclusion in a sample. The desired sample size was 317 employees needed for this study. According to Leedy and Ormrod (2010:207) population sized around 500 and more, 50 percent of the population should be sampled. In a selection of a random sample, it was noted that it required a list identifying the elements of the population. Keeping these limitations in mind, Bailey (2007:63) indicates that the deliberate choice of sample to represent a greater population makes it possible for the survey to be undertaken.

Therefore, the list of all employees in the Iron making division was obtained from employee database and assigned a unique number to each element. The numbers were randomly selected from within the range of 1 to 634. Every element whose assigned number matches a number the researcher comes across was selected for the sample. Numbers the researcher comes across that do not match the numbers assigned the elements in the target population were ignored. Participants were selected until all 317 employees were part of the sample. Finally, all 317 employees were invited to take part in this research. Each of these employees was subsequently sent a questionnaire to complete.

The information derived from the resulting sample was employed to develop useful generalisations about the population and was found to be representative of the entire population (Cooper & Schindler 2001:166; Welman & Kruger 2001:47; Henning, Van

Rensburg & Smit 2004:30). Therefore, n=317 was deemed the adequate sample for this study.

3.4 DATA COLLECTION AND RESEARCH INSTRUMENT

Data are information obtained in the course of the study. It takes a variety of forms to be obtained including measurements, survey responses and observations. A suitable medium guard against inaccurate collection of information to ensure that the final report answers the initial research questions (Thomas 2004:216; Terre Blanche, Durrhein & Painter 2006:35; Creswell & Plano Clark 2011:117).

For the collection of data, a structured questionnaire was developed to capture relevant data from a sample of respondents (Sarantakos 2005:239; Swanso & Holton III 2005:98; Walliman 2006:42). The questionnaire used for the collection of data is discussed in the following section.

3.4.1 Questionnaire construction

A questionnaire is a preformatted set of questions. It provides a space or some mechanism for recording the responses (Sekeran & Bougie 2010:184). It is comparatively convenient and inexpensive with the likelihood of obtaining accurate information on the basis that anonymity is assured (Brynard & Hanekom 2006:46; Nardi 2006:68; Davies 2007:82; Kumar 2011b:130). It can be mailed, e-mailed, or personally distributed to a group of respondents (Blaxter, Hughes & Tight 2006:179; Martin & Guerin 2006:171).

Considering the dimensions of the questionnaire design process, a general sequence, as stipulated by McDaniel and Gates (2004:356), was followed focusing on the steps involved in designing a quality data collection instrument. The questionnaire developed was based on closed-ended questions and on a five-point Likert rating scale ranging from strongly disagree = 1 to strongly agree = 5 (Collins & Hussey 2003:184). The Likert scale was used in sections C, D, E and F, thereby restricting the answers on specific questions,

requiring the respondents to indicate a degree of agreement or disagreement with each of a series of statements related to the items.

Questions for the study were generated from previous studies and from the researcher and the supervisor's experience. The supervisor was instrumental in guiding this process. Close attention was paid to the generation of items, type of questions, language used and order of items during questionnaire development, which required considerable work to refine wording and content (Janes 2001:419; Goddard & Melville 2007:47; Synodinos 2003:221). Items were generated from a number of sources including consultation with the supervisor and co-supervisor, and the proposed review of associated literature. In addition, a key strategy in item generation was to revisit the research objectives frequently, and to ensure that items reflect these and remain relevant. It was during this stage that the proposed subscales of a questionnaire were identified, and to ensure that items were representative of these (Saunders, Lewis & Thornhill 2003:291; Barbour 2008:89).

A questionnaire was broken down according to the various sections as outlined below:

- **Section A:** Reflects upon employee exposure to the health and safety induction programme.
- **Section B:** Biographical information.
- **Section C:** Reflects upon employee experience of the health and safety induction.
- **Section D:** Reflects upon the effectiveness of the health and safety induction.
- **Section E:** Reflects upon the health and safety induction training.
- **Section F:** Reflects upon the effectiveness of the health and safety induction training.

3.4.2 Pilot study

Conducting a pilot study gives an advanced warning to the researcher about the fundamental problems in the questionnaire design. Collins (2010:165) and Zikmund *et al.* (2010:361) indicate that a pilot study helps to identify factors that could possibly have had

a negative influence on the quality of the questionnaire. It further helps to identify weaknesses in the questionnaire before it is used on a larger scale.

A pilot study was undertaken in order to ensure accuracy of the questionnaire and to ensure that it is clear and understandable. The main aim was to get feedback on the feasibility and by checking that data collected will be as relevant and accurate as possible (Seale 2004:172), and further to inform the researcher about likely outcomes. The questionnaire was piloted on a sample of 20 respondents similar to those who make up the sample population. These participants were selected based on their availability from the employees who were attending ArcelorMittal training at Quest conference centre (Vanderbijlpark). Permission to conduct a pilot survey was granted for researcher and employees to take part, and to detect possible flaws in the questionnaire procedures (including instructions and time limits) to identify unclear or ambiguous items, and also the wording of items in a questionnaire (Collins 2010:165).

The questionnaire for pilot study was being administered to 20 employees, all 20 completed questionnaires were returned and analysed. Following feedback from the respondents, no difficulties were encountered in filling up the questionnaire. However, it was decided to make a series of changes to the questionnaire. Subheadings in Section D, “The first day: Initial Induction (D1- D13), Induction within the first week (D14- D18), Induction during the first month (D19- D21), and Induction within the first six month period (D22- D27)” were added. The reason for this was that the author realised that there were too many possible answers contained in the section. It was decided to distinguish between the processes of the induction to make the analysis of the answers manageable.

“Section G: additional comments” was eliminated. The reason for this was that on reflection, the researcher realised that the Section G had low response rate, that is, no responses were obtained from that section, and therefore it was important to eliminate that section.

Items were revised for uniformity and clarity, and adjusted for ineffective or an unbalanced number of options. Some items were eliminated entirely and new items were added. The reason for this was that on reflection the researcher realised that some sections had a low response rate, that there were too many possible answers contained in the question, and also some statements were deleted due to repetition.

The reliability of the questionnaire was assessed by the computation of the Cronbach alpha coefficient for Sections C, D, E and F in order to determine the reliability of the scales under investigation. The Cronbach alpha for each of the sections ranged from 0.957 (Section C), 0.935 (Section D), 0.904 (Section E) and 0.854 (Section F). The overall reliability statistics for Section C, D, E and F indicated 0.957 for 72 items of those sections. The examination of the alpha values revealed that factors exceeded the reliability recommended benchmark value of 0.70, thus demonstrating good internal consistency and reliability. The results of the pilot study are reported in Chapter 4, Section 4.2.

3.4.3 Administration of the actual questionnaire

After the pilot study, final changes were made to the research instrument. When the researcher discovered a problem with questions that were left unanswered by respondents (item non-response), the items were adjusted to make it completely consistent, or readable. The questionnaire was modified and improved based on the researchers' experiences during the pilot study, and the final questionnaire was administered to respondents.

The questionnaires were administered personally and data collected from the sample of 317 ArcelorMittal respondents. Selected respondents were invited to complete the questionnaire by means of a cover letter. The research topic and intention of the study was clarified on the cover letter with a request for honest feedback. A vote of appreciation concludes the questionnaire. A cover letter was provided specifying the reason for the research project as well as the procedure for answering the questionnaire. A closing date

was stated to facilitate the collection of completed questionnaires. Completed questionnaires were collected and submitted to a statistician for statistical analysis.

Written permission was obtained from ArcelorMittal to conduct the study (Bruwer 2009:1). According to the ArcelorMittal health and safety policies and procedures, non-employees are not allowed to enter the premises of a high-risk zone. For this reason, questionnaires were distributed by means of in-person drop-off and pick-up to manager, safety management and SHERQ.

Once the data were collected, the researcher numbered each questionnaire and captured the corresponding data using Microsoft Excel. This was done because if there was a complication with any of the data inputs, then the researcher could look up that specific questionnaire and correct the anomaly. Once all the data were captured, a statistician transferred it to a statistical data analysis program, namely the Statistical Package for Social Sciences (SPSS), version 21.0 for Windows.

3.5 ASSESSING VALIDITY AND RELIABILITY OF MEASURING INSTRUMENT

Validity and reliability, according to Synodinos (2003:221), are the statistical criteria used to assess whether the research provides a good measure. Fink (2006:7) identifies them as the benchmark criteria for assessing the quality of the instrument.

3.5.1 Validity

Validity refers to the degree to which an empirical measure adequately reflects the real meaning of the concept under investigation. It denotes the extent to which the evidence supports the conclusions that are made from the scores on a measure (Cooper & Schindler 2001:349). This is supported by Ihantola and Kihn (2011:44) who indicated that an instrument is valid if it measures what it is intended to measure and accurately achieves

the purpose for which it was designed. That is, the instrument's validity can be regarded as the extent to which the instrument actually reflects the construct being examined.

Determining whether an instrument truthfully measures what it is supposed to measure, given the context of its application, is referred to as instrument validity (Descombe 2010:106). The questionnaire designed for this study was subjected to a validation process. Validity in this study was ensured in terms of the following procedures:

Face validity: relates to whether an instrument measures what it appears to measure. Brink, (2006:160) indicates that face validity is a desirable characteristic of an instrument. If a measurement instrument does not have face validity, the researcher may meet with resistance from respondents, for example they may not respond, or may respond dishonestly. In this study, the instrument was subjected to intuitive judgments made by both supervisors, with regard to determining clarity of content and readability of the instrument. The instrument was then structured in a way so as not only to accurately measure what is supposed to measure, but also to appear to do so.

Content validity: refers to the degree to which the items of the instrument represent the theoretical content domain of the construct to be measured. It relates to a specific procedure in constructing an instrument rather than performing statistical measurements (Zikmund *et al.* 2010:320). According to Brink (2006:169), content validity is primarily used in constructing questionnaires. In this research, content validity was measured by relying on the knowledge of people who were familiar with the construct being measured. Copies of the questionnaire and copies of the research questions were given to supervisor and a statistician to provide feedback on how well each question measure the construct in question. They reported that some statements were not tapping into aspects of effectiveness, so the statements would either be altered or eliminated altogether. Their feedback was analysed and informed decisions was made about the effectiveness of each question. It was during this stage that the proposed subscales of a questionnaire were

identified, and to ensure that items were representative of these (Saunders, Lewis & Thornhill 2003:291; Barbour 2008:89). The observations and suggestions were modified, and changes were made to the questionnaire regarding deletion of items, addition of items, rewording and rephrasing of questions. This support the statement by Zikmund *et al.* (2010:320) that expert/s must agree that the questions as a whole constitute a valid and representative test of the variable being measured.

The extent to which the instrument measures the construct was determined (Brink, 2006:160). It was additionally useful to evaluate the internal consistency reliability of the instrument. The internal consistency reliability was satisfactory as a score of 0.70 or more was achieved and considered sufficient (Bergh & Theron 2006:75).

Construct validity: involves establishing the extent to which an instrument effectively measures the theoretical construct that it was intended to measure. The process of establishing construct validity begins by understanding the meaning of the construct and hypothesising its relationship to other variables or constructs. An instrument portraying the construct is consequently developed and if the test's score is determined to be reliable, its association with other tests or variables is established (Shiu *et al.* 2009:282).

There are various procedures for determining construct validity. For the purposes of this study, the procedures discussed above provides some evidence of the construct validity of the instrument. A pilot study was also undertaken. Based on the feedback from the respondents, minor changes were made to the questionnaire, unclear questions and wording of items in a questionnaire were changed. To further ascertain construct validity, the Cronbach alpha was used and comprised scores for each of the items measured. At this stage, the reliability scale was found to be acceptable as the Cronbach alpha coefficient was above the acceptable benchmark level of 0.70. In addition, factor analysis, more specifically exploratory factor analysis, was utilised to determine how many factors are necessary to explain the interrelationships among a set of items (Zikmund *et al.*

2010:608). Item reduction was undertaken by examining low item correlations. The general rule of thumb of extracting factors with eigenvalues greater than 1.0 is considered appropriate. Only factors with eigenvalues greater than 1.0 were retained.

3.5.2 Reliability

Reliability relates to the consistency of the data collected. It refers to the probability that a particular measurement procedure will generate the same results if applied repeatedly to the same object (Riege 2003:81). In similar fashion, Bergh and Theron (2006:37) describe reliability as a process or measurement repeated in various situations or by different researchers that will provide more or less the same measurement results. It is mainly concerned “not with what is being measured, but with how well it is being measured”

According to Punch (2005:98), reliability asks the question: Does the instrument consistently give the same results with the same group of people under the same condition? Similarly, reliability is the measure of accuracy, dependability, consistency, and stability (O’Leary 2004:59). Therefore, reliability of the instrument is the extent to which independent administration of the same instrument yields the same results under comparable conditions.

Reliability evaluates the stability of measures administered at different times to the same individuals or using the same standard, the equivalence of sets of items from the same test or of different observers scoring a behaviour or event using the same instrument (Kimberlin & Winterstein 2008:2277). They further indicates that reliability coefficients range from 0.00 to 1.00, with higher coefficients indicating higher levels of reliability.

The reliability was tested by computing the Cronbach alpha, where the guideline for the overall scale and sub-scales were considered (Malhotra 2010:285). Reliability was expressed as a correlation coefficient to demonstrate the effectiveness of a measurement. Coefficient alpha (Cronbach alpha (α)), as the most commonly applied estimate of a

multiple item scales, represents the average of all possible split-half reliabilities for a construct (Zikmund *et al.* 2007:320). The coefficient demonstrates whether the different items converge.

Internal consistency reliability was utilised to determine the reliability on each of the subscales. Internal consistency involves the analysis of item variances and specifies the extent to which the various items on a measure are intercorrelate. The Cronbach alpha coefficients of each section ranged from 0.749 (section C), 0.935 (section D), 0.904 (section E) and 0.854 (section F) for the sample (n=20), which was considered as very good. There are various recommendations on what is regarded as an adequate reliability coefficient, but a score of 0.70 or more was generally considered sufficient (Bergh & Theron 2006:75).

3.6 DATA ANALYSIS

Analysis of the collected data was done by using descriptive statistics. Descriptive statistics deal with scientific methods of sampling, collection, condensation, presentation and analysis of numerical data. Descriptive statistics were calculated on the variables to summarise and describe the data collected. Survey results were measured by category. At this point, data will be organised, analysed, interpret, summarised and reported (Wiskers 2001:245; Lowe 2007:114).

The assistance of a statistician was enlisted during this phase to capture all the data into the SPSS version 21.0. Responses were edited to check completeness, consistency and legibility. Editing detects errors and omissions on the questionnaire. Responses were then labelled and assigned numerical scores or symbols permitting transfer to the computer (Dorsten & Hotchkiss 2005:257). Numerically collected data were characterised and described using measures of central tendency (mean, median and mode) and measures of dispersion (range and standard deviation) (Punch 2005:199; Churchill, Brown & Suter 2010:429).

The findings of the study conducted at ArcelorMittal in Vanderbijlpark will be reported and presented through charts and graphically tabulated illustrations. They will be presented and categorised according to the objectives of the study. Using these visual presentations to present data makes it easier to understand. This allows for the condensation of large amounts of information into easy-to-understand formats that clearly and effectively communicate important points (Minter & Michaud 2003:12).

3.7 RESEARCH ETHICS

Gathering information from respondents does raise ethical concerns. The principles and rules, which aid in deciding which actions are acceptable to guide the relationship between the respondents and the researcher, refers to research ethics. These principles dictate what is regarded as good, right, fair and just, so as to be respected and maintained (Flick 2007:69).

The researcher was aware of having the responsibility to secure the actual permission and interests of all those who were involved in the study. None of the information discovered was misused, based on a moral responsibility that was maintained towards the respondents. There was a duty to protect the rights of respondents in the study as well as their privacy and sensitivity. The researcher secured writer permission from all involved in the study. Respondents to this study were assured, by means of a covering letter that their participation will be voluntary, and anonymous, and their responses would remain confidential. The results were presented in aggregate (Mauthner, Birch, Jessop & Miller 2002:9; Woodside & McClam 2009:255), whereby individual responses were not identified. Interaction with respondents was done in a sensitive manner so as not to cause emotional harm, and be free from any personal biases or opinions of the researcher (Devlin 2006:162).

3.8 SUMMARY

This chapter presented an overview of the research objectives. It addressed the methodology employed for this study. This study was quantitative in nature, therefore, the precise description of the population and sample was provided. An overview of the sampling strategy was explained. A simple random sampling was utilised, whereby all respondents have a known chance of being selected. The method of data collection, construction of the research instrument, the pilot study, and the administration of the measuring instrument were also discussed.

Techniques that were applied to determine the reliability of the research questionnaire were elucidated. This involved the discussion of establishing validity of an instrument, hence, the coefficient alpha (Cronbach alpha) was used to verify reliability of the instrument. The data analysis and statistical procedures used in the study were discussed briefly. Also, the ethical concerns in gathering information from respondents were highlighted.

Chapter 4 provides an analysis and interpretation of the empirical findings in line with the objectives of the study.

CHAPTER FOUR: ANALYSIS AND INTERPRETATION OF FINDINGS

4.1 INTRODUCTION

The previous chapter focused on the research methodology and research design used throughout this research project. It elaborated on the research approach, including the measurement instrument and the statistical techniques applied. This chapter reports on the statistical analysis and interpretation of the empirical finding of the data collected. It begins by outlining the procedure set out for the pilot study, followed by the analysis of the main survey.

4.2 PILOT STUDY

The questionnaire was scrutinised by the researcher and the supervisor who considered comments during the refinement of the questionnaire. Pilot testing involved a trial run of the questionnaire, with a limited sample size of respondents from the target population in order to iron out the main problems with regard to the questionnaire (Malhotra, 2010:153). A pilot study was conducted in order to test ambiguity or bias in the questions, or to address fundamental problems in the instruction or administrative procedures prior to the main survey.

A limited number of respondents (n=20) was used in the pilot study. Respondents from the pilot study were drawn randomly from the same population from which the sample was drawn. However, these respondents were not part of the main study. A questionnaire was administered at the pilot study stage.

At this stage, the reliability was obtained by computing the Cronbach-alpha coefficient for Sections C, D, E and F. The reliability indicators exceeded the suggested level of 0.70, which indicated the reliability of the questionnaire. Table 1 reports on the results.

Table 1: Pilot study reliability statistics

Factors	Number of items	Cronbach alpha
1. Section C (The employee induction)	10	0.749
2. Section D (The effectiveness of employee induction)	27	0.935
3. Section E (Health and safety induction training)	16	0.904
4. Section F (The effectiveness of health and safety induction)	19	0.854

Malhotra (2010:274) indicates that if the scale items for surveys maintain values of 0.70 or larger during the early stages of research then reliability is considered to be satisfactory. The Cronbach alpha values achieved this criterion as the variables in Sections C, D, E and F achieved this value (> 0.70).

4.3 ANALYSIS OF THE MAIN STUDY (descriptive statistics)

The descriptive analysis representing a more efficient means of summarising the characteristics of large sets of data was undertaken. The questionnaire comprised of six sections (Sections A, B, C, D, E, F) as outlined in Chapter 3, Section 3.4.1. A total of 317 questionnaires were distributed to employees in the iron-making division, and 160 questionnaires were returned, which meet the required inclusion criteria. A response rate of 50 percent was achieved. However, neither the reasons for refusal to participate, nor the characteristics of the non-respondents were known.

Section A required respondents to reflect upon their exposure to a health and safety induction programme. In this section respondents were to indicate ‘yes’ to question A1 and A2 in order to continue with the questionnaire.

Table 2: Descriptive statistics for Section A

Variables	Responses %		Cumulative %
	Yes	No	
	100	0	100
A1 Are you working in the iron-making division?	100	0	100
A2 Have you undergone health and safety induction?	100	0	100
I attended health and safety induction as.....			
A3 Newly appointed employee	91	9	100
A4 Promoted employee	66.7	33.3	100
A5 Transferred employee	40.5	59.5	100
A6 Existing employee	94.8	5.2	100

The results in Table 2 reflect that all respondents (100%) indicated that they are working in the iron-making division and have been exposed to health and safety induction. The majority of respondents who were exposed to health and safety induction are newly appointed employees (91%) and existing ArcelorMittal employees (94.8%).

4.4 DEMOGRAPHIC PROFILE OF RESPONDENTS

Section B of the questionnaire was intended to describe demographic variables of the sample and to assess any influence on the research findings. The demographic data consisted of gender, race, age, home language, nature of employment, time period in current position, total period of service at ArcelorMittal and occupational level at ArcelorMittal. Descriptive statistical analysis was used to identify frequencies and percentages.

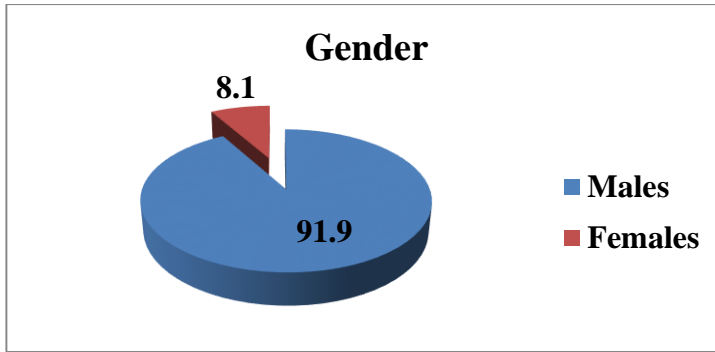


Figure 6: Gender of respondents

Figure 6 provides an overview of the sample's gender composition. The profile of sampled respondents in the survey comprised 147 males and 13 females (representing 91.9% and 8.1% respectively). This gender composition tends to suggest that within ArcelorMittal iron-making division males make up a substantially larger majority than females.

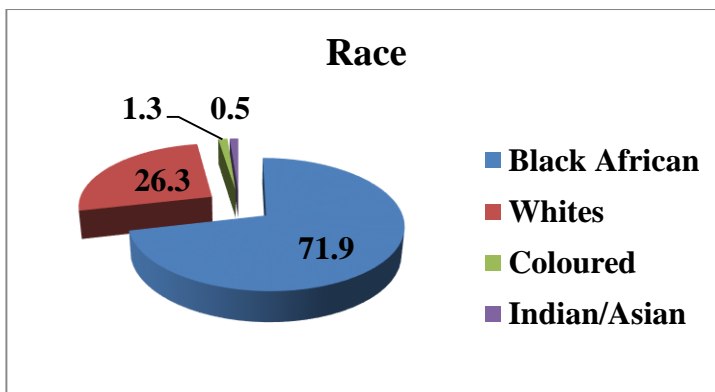


Figure 7: Race of respondents

The race of the sample, as illustrated by Figure 7, shows that only 0.5 percent (n=1) of the respondents were Indian/Asian, 1.3 percent (n=2) were Coloured, 26.3 percent (n=42) represented White, and the majority 71.9 percent (n=115) of the sample were Black Africans. The race of the majority of the respondents within the iron-making division of ArcelorMittal (Vanderbijlpark) is Black Africans.

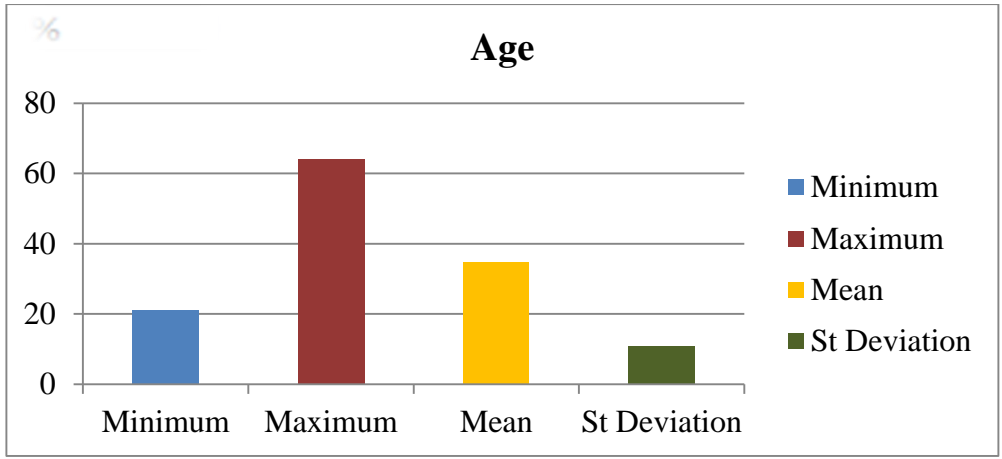


Figure 8: Age of respondents

Figure 8 indicates that the age of the respondents varied from 21 to 64 years, with a mean age of 35 years. The age of the majority of the respondents within the iron-making division of ArcelorMittal (Vanderbijlpark) is 35 years.

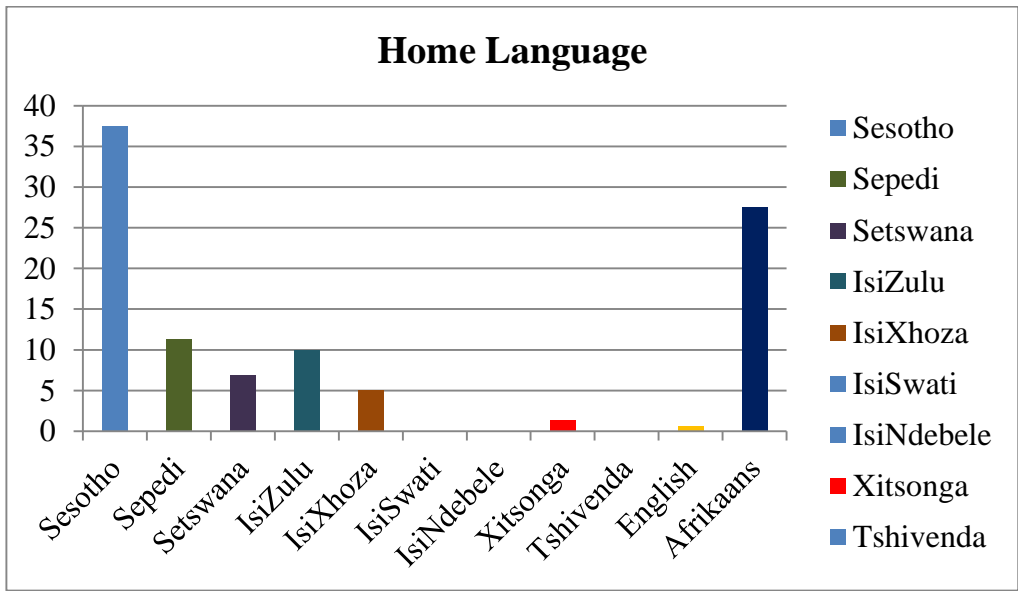


Figure 9: Home language of respondents

In terms of the home language of participants, Figure 9 indicates the languages of the respondents. The indication is that the majority of employees who work in iron-making division (37.5%) are Sesotho, followed by Afrikaans (27.5%).

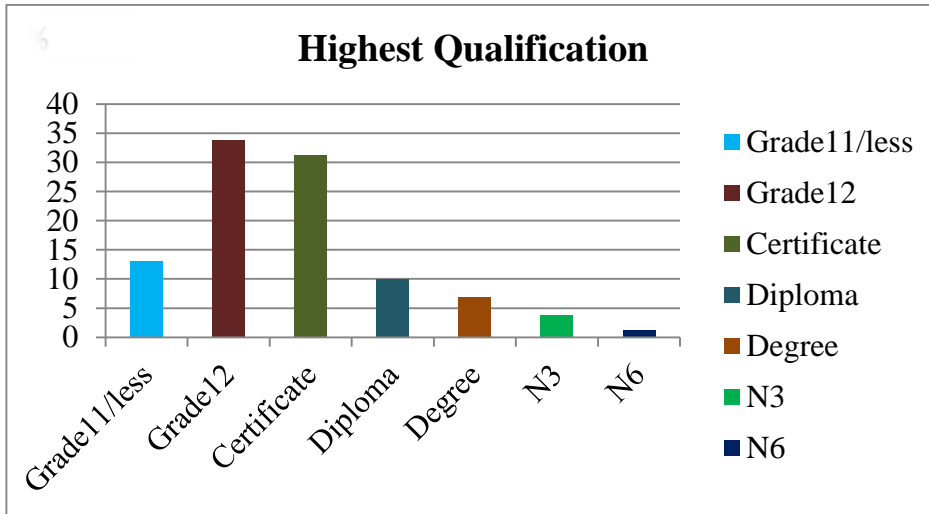


Figure 10: Highest qualification of respondents

In terms of formal education levels, Figure 10 shows that a large number of the respondents had at least a grade 12 or a certificate. This implies that the majority of the individuals had either a grade 12 (33.8%), certificate (31.1%), or grade 11 (13.1%). The remainder of the sample represented employees possessing a diploma (10%), degree (6.9%), N3 (3.8%) and N6 (1.3%).

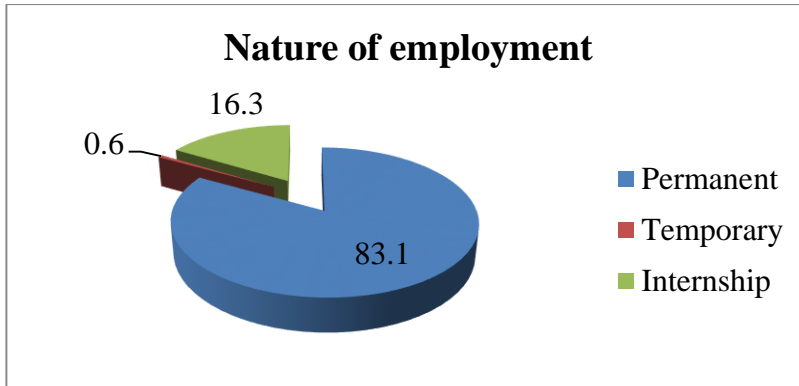


Figure 11: Nature of employment of respondents

In terms of the nature of employment, the respondents’ feedback in Figure 11 indicated that the majority of the employees were permanently employed (83.1%) by ArcelorMittal in the iron-making division. 16.3 percent were temporary employees and fewer employees (0.6%) were on the internship programme.

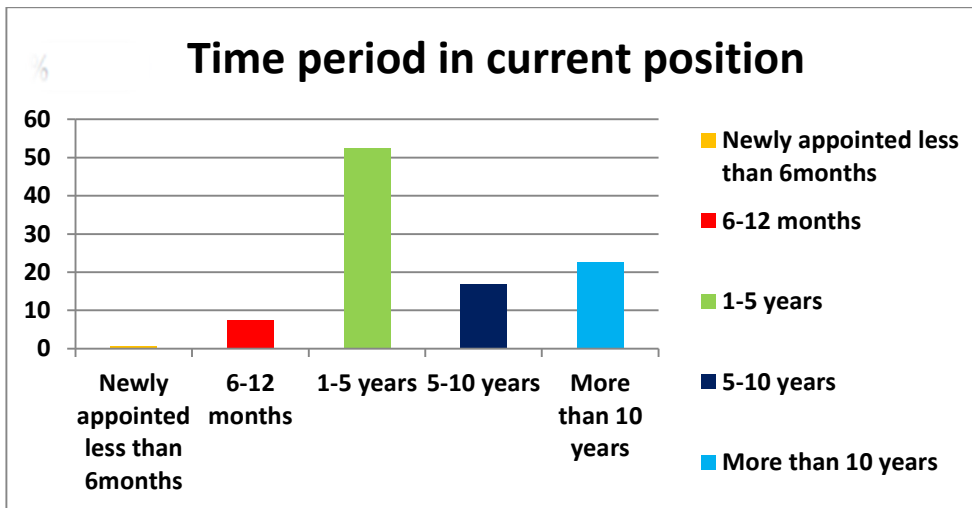


Figure 12: Time period in current position of respondents

The time period figures for the sample (Figure 12) indicate that the sample consisted mainly of employee who had one to five years of work experience (52.5%). 22.5 percent had more than 10 years of work experience, and 16.9 percent had five to ten years of work

experience, while a limited number, 0.6 percent, had less than six months work experience.

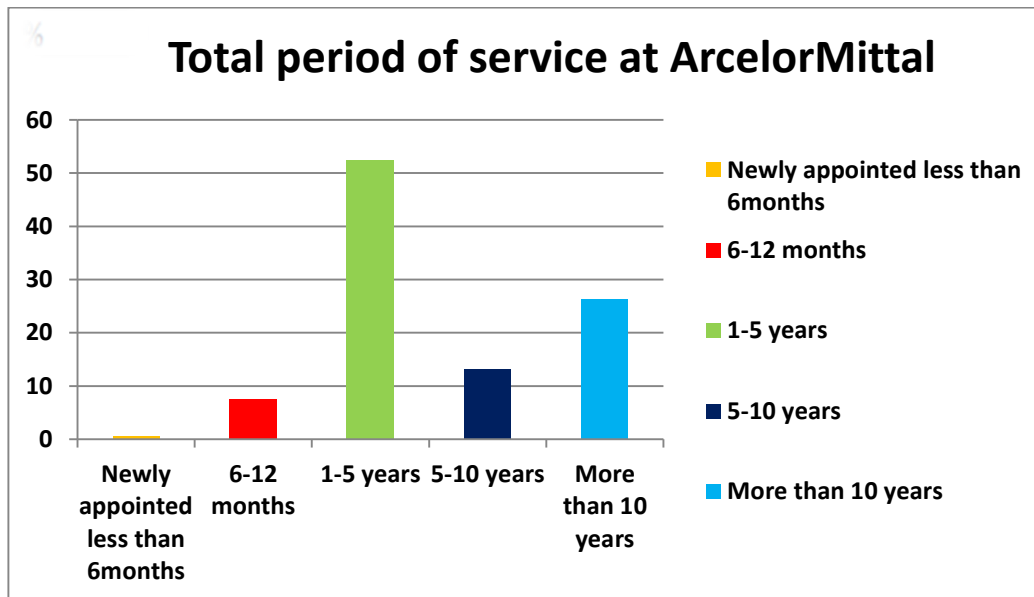


Figure 13: Total period of service at ArcelorMittal

The total period of service profile for the sample (Figure 13) indicates that the majority of the employees had been in employed by the company for one to five years (52.5%), while some of them had been in the employ for over 10 years (26.3%). 13.1 percent had been at ArcelorMittal for five to ten years, 7.5 percent had been employed there for six to 12 months, and a few employees (0.6 %) had been working at ArcelorMittal for less than six months.

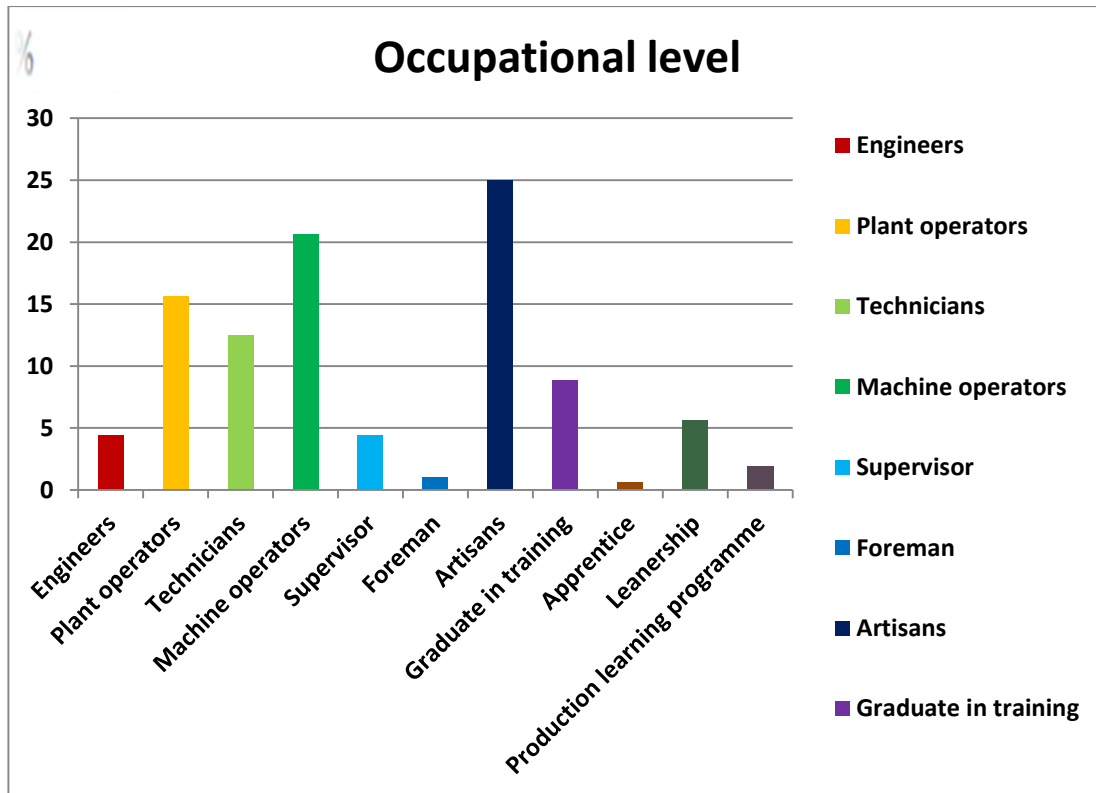


Figure 14: Occupational level of respondents

Figure 14 provides the profile of the sample in terms of their occupational level. The occupational level for the sample indicates that the majority of the employers were artisans (25%), machine operators (20.6%), plant operators (15.6%), technicians (12.5%), graduates in training (8.8%), apprentice (0.6%), learnership (5.6%), production (1.9%), Engineers (4.4%), supervisor (4.4%) and foreman (0.6%).

4.5 THE EMPLOYEE INDUCTION

Section C required employees to reflect upon their experience of induction programmes. The questions were based on a five-point Likert scale with one denoting strongly disagree, two disagree, three neutral about the statements, four agree, and a value of five denoting strong agreement with the statements.

Table 3: Employee induction

Code	Variables	Strongly disagree		Disagree		Neutral		Agree		Strongly agree		Agree + strongly agree %
		No	%	No	%	No	%	No	%	No	%	%
C1	I am aware of the content of employee induction programme					4	2.5	90	56.3	66	41.3	97.6
C2	I completed an induction programme upon my arrival at ArcelorMittal			1	0.6	1	0.6	73	45.6	85	53.1	98.7
C3	I was informed about the date of the induction programme					3	1.9	79	49.4	78	48.8	98.2
C4	I was informed about the time of the induction programme					3	1.9	83	51.9	74	46.3	98.2
C5	I was informed about the venue of the induction programme	1	0.6			4	2.5	81	50.6	74	46.3	96.6
C6	I was informed about the expected outcomes of the induction programme	1	0.6	2	1.3	10	6.3	79	49.4	68	42.5	91.9
C7	I was informed about the induction programme coordinator			2	1.3	9	5.6	89	55.6	60	37.5	93.1

C8	I was informed about my role within an induction programme			1	0.6	10	6.3	82	51.3	67	41.9	93.2
C9	I was encouraged to complete the Induction Checklist at the end of the induction programme					5	3.1	84	52.5	71	44.4	96.9

The results revealed that majority of respondents agreed and strongly agreed with the statements. Therefore, for the purpose of the interpretation agree and strongly agree were combined. Thus, the results revealed that most respondents felt strongly about their induction programme. The critical outlook and reflection of the respondents on the employee induction led them to a realisation that their experience of the induction was very good.

4.5 THE EFFECTIVENESS OF EMPLOYEE INDUCTION

Section D sought to ascertain the effectiveness of the induction that respondents received. The questions were based on a five-point Likert scale with one denoting strongly disagree, two disagree, three neutral about the statements, four agree, and a value of five denoting strong agreement with the statements.

The ArcelorMittal induction programme lasts up to six months (ArcelorMittal 2012d:7, 54, 55, 58, 59) (see Section 2.15.2.1). Table 4 indicates the responses expressed, as a percent, during the different phases of the induction period.

Table 4: The effectiveness of employee induction

Code	Variables	Strongly disagree		Disagree		Neutral		Agree		Strongly agree	
		No	%	No	%	No	%	No	%	No	%
The first day: Initial induction											
D1	The induction I received helped me to become familiar with my new workplace					2	1.3	78	48.8	80	50.0
D2	The induction programme has helped me to do my current job more effectively					2	1.3	85	53.1	73	45.6
D3	I met my supervisor on the first day					7	4.4	86	53.8	67	41.9
D4	I was provided with the details of what is included in the employee induction programme					5	3.1	88	55.0	67	41.9
D5	I received an induction file covering induction objectives	1	0.6	1	0.6	12	7.5	89	55.6	57	35.6
D6	My induction partner (buddy) was indicated to me	1	0.6	3	1.9	20	12.5	90	56.3	46	28.8
D7	I was familiarised with my immediate work area					8	5.0	97	60.6	55	34.4
D8	I was introduced to colleagues I will be working with					5	3.1	93	58.1	62	38.8
D9	The duties of the job was discussed with me					4	2.5	83	51.9	73	45.6
D10	I was given a work area tour			3	1.9	3	1.9	86	53.8	68	42.5
D11	I was given instructions on procedures to follow while doing my duties					3	1.9	84	52.5	73	45.6

D12	Health and safety procedures were explained to me					3	1.9	78	48.8	79	49.4
D13	I met with Induction Coordinator to review my progress	1	0.6	1	0.6	12	7.5	80	50.0	65	40.6
Induction within the first week											
D14	My role within ArcelorMittal was discussed in detail with me					6	3.8	91	56.9	63	39.4
D15	Information about my division was provided to me			1	0.6	3	1.9	92	57.5	64	40.0
D16	I met with my co-workers to discuss expectations of our working relationships					5	3.1	90	56.3	65	40.6
D17	I was provided with the details about specific tasks I was required to perform in my work context			1	0.6	2	1.3	86	53.8	71	44.4
D18	My facilitator provided me with continuous support while I adopted to my new circumstances					9	5.6	93	58.1	58	36.3
Induction during the first month											
D19	I gained an understanding of the rules and regulation relevant to my work					1	0.6	84	52.5	75	46.9
D20	My work progress was discussed with my immediate supervisor					4	2.5	88	55.0	68	42.5
D21	During the first month, I was provided with on-the-job training					1	0.6	85	53.1	74	46.3
Induction within the first six months											
D22	Further training needs on the job was identified					5	3.1	96	60.0	59	36.9

D23	My supervisor scheduled meetings to discuss my performance appraisal			1	0.6	8	5.0	88	55.0	62	38.8
D24	I was given constructive feedback on my job performance	1	0.6			6	3.8	91	56.9	62	38.8
D25	I experienced the induction programme that I received as useful	1	0.6			3	1.9	86	53.8	70	43.8
D26	Induction programme effectively assisted me with my integration into the work context					6	3.8	85	53.1	69	43.1
D27	I felt that I am a part of ArcelorMittal after completing the employee induction programme					5	3.1	82	51.3	73	45.6

Table 4 reveals statistical analysis indicated that the vast majority of respondents agreed and strongly agreed with all the statements in this section. Based on the statistical data, constant results were found through all stages. This indicates that respondents view the on-boarding programme (induction) as it was called at ArcelorMittal, as successful. This would imply that the majority of respondents feel that the employee induction was consistent and effective throughout all four stages.

4.6 THE HEALTH AND SAFETY INDUCTION TRAINING

Section E consists of 15 questions to reflect upon employees' experience of the health and safety induction training they received as part of an induction programme. The questions were based on a five-point Likert scale with one denoting strongly disagree, two disagree, three neutral about the statements, four agree, and a value of five denoting strongly agree to the statements. Table 5 below indicates statistical data findings about health and safety induction.

Table 5: Health and safety induction training

Code	Variables	Strongly disagree		Disagree		Neutral		Agree		Strongly agree	
		No	%	No	%	No	%	No	%	No	%
E1	ArcelorMittal provided the health and safety induction training					1	0.6	74	46.3	85	53.1
E2	I was trained in health and safety procedures					2	1.3	75	46.9	83	51.9
E3	Health and safety induction training ensured that I received effective information about health and safety					1	0.6	79	49.4	80	50.0
E4	Health and safety policies have been explained to me during the health and safety induction training					2	1.3	88	55	70	43.8
E5	I was made aware of health & safety practitioner in my department					3	1.9	85	53.1	72	45
E6	I was made aware of the occupational Health Service					2	1.3	85	51.3	76	47.5
E7	I was made aware of first aid box					6	3.8	74	46.3	80	50.0
E8	Incident/accident reporting procedure was explained during health and safety induction training					1	0.6	76	47.5	83	51.9
E9	General workplace safety issues were discussed during the health and safety induction training					1	0.6	82	51.3	77	48.1
E10	Work with hazardous substances was explained during the health and safety induction training					1	0.6	80	50.0	79	49.4
E11	Safe use of machinery was discussed during the health and safety induction training					1	0.6	75	46.9	84	52.5

E12	Safe systems of work specific to my work context were clarified during the health and safety induction training					1	0.6	82	51.3	77	48.1
E13	The health and safety induction training informed me how to protect myself while I perform my duties					1	0.6	77	48.1	82	51.3
E14	The need for health and safety induction training was highlighted to me during the health and safety induction					1	0.6	81	50.6	78	48.8
E15	Work activities that I am not permitted to undertake was clarified to me					2	1.3	76	47.5	81	50.6

The views of the respondents on the health and safety induction presented in Table 5 indicated that, almost equal percentages of respondents agreed and strongly agreed with the statements. Table 5 further illustrates that the majority of the respondents believed that their health and safety induction was successful, therefore, they were able to carry out their duties and responsibilities in a safe manner.

4.7 THE EFFECTIVENESS OF HEALTH AND SAFETY INDUCTION TRAINING

Section F required employees to reflect upon the effectiveness of the health and safety induction training they received. The questions were based on a five-point Likert scale with one denoting strongly disagree, two disagree, three neutral about the statements, four agree, and a value of five denoting strongly agree with the statements. Table 6 reflects statistical data findings from respondents.

Table 6: The effectiveness of health and safety induction training

Code	Variables	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
		No	%	No	%	No	%	No	%	No	%
After completion of health and safety induction...											
F1	I understand the Occupational Health and Safety Act					1	0.6	78	48.8	81	50.6
F2	I am aware of the location of the health and safety documentation					1	0.6	81	50.6	78	48.8
F3	I am familiar with the health and safety policies							78	48.8	82	51.3
F4	I am able to use the equipment safely within my work context							79	49.4	81	50.6
F5	I know how to communicate emergencies in my workplace							82	51.3	78	48.8
F6	I am aware of the safety measures that are taken to ensure that I am safe at the workplace							85	53.1	75	46.9
F7	I follow safety procedures							74	46.3	86	53.8
F8	I know how to recognize safety hazards							79	49.4	81	50.6
F9	I have been made aware who the current Representatives on the Health & Safety Committee are					4	2.5	76	47.5	80	50.0
F10	I am able to seek positive improvements in										

	my own health and safety environment					1	0.6	81	50.6	78	48.8
F11	I report anything that appears dangerous within the work environment					1	0.6	73	45.6	86	53.8
F12	I take reasonable care of myself in the work environment							72	45.0	88	55.0
F13	I do not undertake tasks that I have not been trained to do							74	46.3	86	53.8
F14	I follow the advice of safety notices					1	0.6	74	46.3	85	53.1
F15	I am working in a safe work environment					2	1.3	73	45.6	85	53.1
F16	ArcelorMittal as my employer is concerned with providing safe work environment					3	1.9	78	48.8	79	49.4
F17	Health and safety is a major concern at ArcelorMittal					1	0.6	72	45.0	87	54.4
F18	ArcelorMittal have done all that is reasonable to protect me in my workplace					7	4.4	77	48.1	76	47.5

Table 6, indicates that the majority of the respondents believed that the health and safety induction provided them with the support they need to carry out their duties. This would imply that employees were afforded opportunities for health and safety induction. Table 6 reflects that the majority of the respondents agreed and strongly agreed with the statements. This would imply that employees, after completing their health and safety induction, felt they understood the health and safety governing their work context and

situations around them. Most importantly, they felt they understood the act behind health and safety, which will make them familiar with health and safety policies, the safety procedures to follow, how to use equipment in a safe manner, and any safety precautions that need to be taken care of when performing their work. Section 2.15.2.2 in Chapter 2 explains that ArcelorMittal upholds the health and safety of its employees in the workplace as a priority. In Table 6, respondents indicated that ArcelorMittal provides them with a safe work environment, and has done all that is reasonable to protect them from any health and safety risk or hazards.

4.8 RELIABILITY ANALYSIS

To ascertain reliability, the Cronbach alpha was calculated for Sections C, D, E and F of the questionnaire. Table 7 provides an overview of the reliability values.

Table 7: Internal reliability statistics

Factors	Number of items	Cronbach alpha
5. Section C (The employee induction)	9	.943
6. Section D (The effectiveness of employee induction)	27	.884
7. Section E (Health and safety induction training)	15	.976
8. Section F (Effectiveness of health and safety induction)	18	.976

The reliability coefficients of the study reported in Table 7 indicate reasonably high alphas. This shows that all sections of the questionnaire meet the criteria with values ranging above 0.7. A study done by Nair (2007:96) yielded almost the same results and indicated that a score of .80 or higher meant that 80 percent of the variance was systematic or reliable variance. This is an indication of the reliability of the instrument as values above the 0.7 benchmark were obtained (Malhotra 2010: 285).

The Cronbach alpha values for each of the scales making up latent variables provide evidence that each of the scales exhibit satisfactory reliability, with values ranging from 0.884 to 0.976, it can be said that the data collected in this study were reliable.

4.9 FACTOR ANALYSIS

Factor analysis is a technique of statistically identifying a reduced number of factors from a larger number of measured variables, where the variables with similar characteristics were grouped together to a small number of constructs, which can be used for analysis. Factor analysis attempts to identify underlying factors that explain and summarise the patterns of correlations among variables, and reduces a large number of variables to a smaller set of variables (Zikmund *et al.* 2010:608).

The determination of factors to be extracted was based on eigen values that represent the amount of variance associated with the factor. To establish the number of factors to be extracted from the data set of the questionnaire, the total percentage of variance for the sample was examined and the proportion of variance was explained.

Table 8: Total variance explained

Section	Initial eigen values			Extraction sums of squared loadings		
	Total	% of variance	Cumulative %	Total	% of Variance	Cumulative %
E	11.256	75.042	75.042	11.256	75.042	75.042
F	12.843	71.352	71.352	12.843	71.352	71.352

The results in Table 8 indicate 75.042 percent (15 questions) for Section E and 71.352 (18 questions) for Section F of the total variance among the items of each section in the questionnaire. Using the principal component analysis as an extraction method, the results for factor analysis for both sections (E and F) are given below:

Table 9: Factor analysis for section E and F

Component Matrix			
Section E	Factor 1	Section F	Factor 2
	1		1
E1. ArcelorMittal provided the health and safety induction training	.878	F1. I understand the Occupational Health and Safety Act	.834
E2. I was trained in health and safety procedures	.888	F2. I am aware of the location of the health and safety documentation	.798
E3. Health and safety induction training ensured that I received effective information about health and safety	.878	F3. I am familiar with the health and safety policies	.867
E4. Health and safety policies have been explained to me during the health and safety induction training	.856	F4. I am able to use the equipment safely within my work context	.878
E5. I was made aware of the health and safety practitioner in my department	.844	F5. I know how to communicate emergencies in my workplace	.880
E6. I was made aware of the Occupational Health Service	.854	F6. I am aware of the safety measures that are taken to ensure that I am safe at the workplace	.866
E7. I was made aware of the first aid box	.815	F7. I follow safety procedures	.840
E8. The incident/ accident reporting procedure was explained during health and safety induction training	.875	F8. I know how to recognize safety hazards	.853
E9. General workplace safety issues were discussed during the health and safety induction training	.900	F9. I have been made aware who the current representatives on the Health & Safety Committee are	.824
E10. Work with hazardous substances was explained during the health and safety induction training	.874	F10. I am able to seek positive improvements in my own health and safety environment	.883
E11. Safe use of machinery was discussed during the health and safety induction training	.867	F11. I report anything that appears dangerous within the work environment	.831
E12. Safe systems of work specific to my work context were clarified during the health and safety induction training	.870	F12. I take reasonable care of myself in the work environment	.851
E13. The health and safety induction training informed me how to protect myself while I perform my duties	.890	F13. I do not undertake tasks that I have not been trained to do	.840

E14. The need for health and safety induction training was highlighted to me during the health and safety induction	.845	F14. I follow the advice of safety notices	.858
E15. Work activities that I am not permitted to undertake were clarified to me	.856	F15. I am working in a safe work environment	.832
		F16. ArcelorMittal as my employer is concerned with providing a safe work environment	.820
		F17. Health and safety is a major concern at ArcelorMittal	.878
		F18. ArcelorMittal have done all that is reasonable to protect me in my workplace	.761

Extraction Method: Principal Component Analysis.

1 component extracted for both sections.

Each number in the above table represents the correlation between item and factor. Correlation help to formulate an interpretation of the factor. It is done by looking at the common thread among the variables that have large loadings for a particular factor. As in the above table, there is only one factor. This indicates that all these questions contribute to those sections.

A chi-square transformation of the matrix determinants was undertaken to obtain a test statistic for sphericity (Malhotra 2010:614). The approximate chi-square was 3046.419 (Section E) and 3498.179 (Section F) with 105 (Section E) and 153 (Section F) degrees of freedom (df) which is significant (sig) at $p < 0.000$ in both sections. Other available options for factor extraction include the Kaiser-Meyer-Olkin measure of sampling adequacy (KMO), which assesses whether the data set is suitable for applying a factor analysis procedure. As a measure of sampling adequacy, the KMO indicator should be 0.5 or greater (Malhotra 2010:293). The results indicated 0.908 (Section E) and 0.926 (Section F), which was considered satisfactory for the use of factor analysis. The Bartlett test of

sphericity also affirmed that factor analysis was appropriate for the data set. The results of KMO and Bartlett’s test are reported in Table 9 below.

Table 10: KMO and Bartlett's test

Sections	Kaiser-Meyer-Olkin test		Bartlett’s test	
	Sampling adequacy	Approx. Chi-Square	df	Sig
E	.908	3046.419	105	.000
F	.926	3498.719	153	.000

The results of both the KMO and Bartlett’s test are illustrated in Table 9. The results indicated the suitability of the data for both sections and their significance. The high values close to one (KMO) and small values <0.05 (Bartlett test) of significance affirmed that factor analysis could be performed.

4.10 INDEPENDENT T-TEST

An independent t-test is intended to show whether there is any statistically significant differences in the mean scores for two groups with a given continuous variable, in this case gender. The t-test was used in the study to determine whether a statistical difference existed between males and females in relation to the effectiveness of employee induction (Section D). The t-test was conducted with the homogeneity value of 0.05. The homogeneity of variance (equal vs. unequal) determines if there is a statistical significance at 5 percent.

The results were used to indicate which variables were significantly different between the two groups (male and female). Of the 27 questions, a statistical difference (sig. 2-tailed) was found on D11 (0.015), D17 (0.022), D19 (0.010), D20 (0.028), D21 (0.000), D22 (0.004), D25 (0.029), D26 (0.031), and D27 (0.019). The results indicated that male respondents felt stronger about the statements than their female counterparts did.

4.11 ONE-WAY ANALYSIS OF VARIANCE (ANOVA)

To avoid the problem of multiple t-tests in a single-factor design, a one-way analysis of variance (ANOVA) was performed to test for significant differences in Section B (B8 Total period of service) with Section D. A one-way analysis of variance was conducted where the test for homogeneity of variances was the $\text{sig} > 0.05$.

The ANOVA looked for significant differences among the means by comparing the variances both within and between groups. The ANOVA results in Table 10 indicated only the items that differ from each other significantly in one or more characteristics, as the items that do not have statistical difference would not affect the relationship of one or more characteristics.

Table 11: ANOVA analysis for section B and section D

	Sum of squares	df	Mean square	F	Sig.
D7 Familiarity with immediate work area					
Between groups	2.463	3	.821	2.741	.045
Within groups	46.731	156	.300		
Total	49.194	159			
D8 Introduction to colleagues					
Between groups	2.593	3	.864	3.057	.030
Within groups	44.101	156	.283		
Total	46.694	159			
D9 Duties of the job was discussed					
Between groups	2.405	3	.802	2.789	.043
Within groups	44.839	156	.287		
Total	47.244	159			
D16 Discussion on the expected working relationship was done with co-workers					
Between groups	2.923	3	.974	3.410	.019
Within groups	44.577	156	.286		
Total	47.500	159			

Table 10 indicates that employees varying in total period of service differ significantly in the view of their familiarity with the immediate work area (D7). The level of significance was at 0.05 percent. The results indicate 0.045 percent of significant level. Employees differing in total period of service differ significantly in their views regarding the introduction to colleagues (D8). Statistical data indicate 0.030 percent of statistical difference.

Table 10 also indicates that employees varying in the total period of service differ significantly in their views of how duties of the job were discussed (0.043%). These imply that the extent to which duties were discussed differ in terms of the total period of service spent in that organisation. In addition, employees with a varying total period of service differ significantly in their views on the extent to which discussion on the expected working relationship was done with co-workers; the significant level was at 0.019 percent

4.12 SUMMARY

Chapter 4 presented the results of the study according to the sections of the questionnaire. The frequency tables and pie charts were used to present the results. Cronbach alpha was performed to assess reliability for Sections C, D, E and F. The reliability proved to be high and the coefficient alphas were satisfactory as they showed values above the 0.7 benchmark. The Kaiser-Meyer-Olkin measure of sampling adequacy was done for Section E and Section F, which was considered satisfactory for the use of factor analysis. The Bartlett's test of sphericity also affirms that factor analysis is appropriate for the data set. Factor analysis was performed using the principal component analysis as an extraction method, and the results show that all the questions contribute to one factor (Section E and F).

The independent t-test was done to determine statistical difference existed between (B1) and Section D. The results indicate that there were statistical differences that existed, and which variables were significantly different between the two groups. An ANOVA analysis

was also done and the significant differences among the means examined by comparing B8 with Section D. The results also indicate that there is a significant difference between the total period of service and some of the statements in Section D that were highlighted.

In the final chapter, Chapter 5, an overview of the study will be provided. The theoretical and empirical objectives will be re-visited in order to establish the attainment of the objectives. The conclusions, limitations and recommendations emanating from the study will also be discussed, as well as implications for future research.

CHAPTER FIVE: DISCUSSION, CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

The previous chapter reported on the results and analysis of empirical findings where figures and tables were used to report on the empirical findings. This chapter presents the conclusions, limitations and recommendations of the study. The purpose is to draw conclusions emanating from the literature and the empirical study to arrive at an informed position about the employee's perception of the effectiveness of health and safety induction. The empirical findings contribute the most to the conclusions drawn. The suggestions and implications for future research were mentioned.

5.2 OVERVIEW AND OUTLINE OF THE CHAPTERS

The purpose of the study was to determine the employee's perceptions of the effectiveness of health and safety induction at ArcelorMittal. Chapter 1 covered the introduction, background and the intention for conducting the study. It explained the reason why this topic has been selected as a problem to be investigated. The research problem, providing the problem statement and the objectives of the selection of this topic, was brought forward and clarified. The objectives of the study focused on both the theoretical and empirical objectives. The research methodology used was outlined and a chapter outline was presented.

Chapter 2 concentrated on the literature review by summarising the literature consulted in order to determine the theories on which the research was based. It was important to review what has been done already in the literature in order to compare and find a good solution to the problem being investigated. The chapter provided the theoretical framework for the research problem as it links to available literature. Where possible, relevant legislations, the company website and relevant policies pertaining to induction

on health and safety were integrated to have a wide scope of investigation into the problem.

Chapter 3 paid attention to the research methodology applied during the investigation. The aim and objectives of this research study were stated. This chapter dealt with the research design, study population, area of study, sampling methods, sampling, data collection methods, methods of data analysis, and ethics pertaining to this research. The research method applied during data collection was quantitative. The development of the survey was discussed, focusing on the questionnaire construction, pilot study and administration of the final questionnaire. Attention was also paid to how the validity and reliability of the study was executed, and how the statistical processing was explored.

Chapter 4 concentrated mainly on the presentation of the analyses of the survey data. This chapter contained the in-depth presentation and detailed discussion of the data collected during the study in terms of the frequencies and percentages. The empirical findings were reported using descriptive statistics, and illustrations were done by means of tables and figures for easy interpretation of the survey results.

To ascertain reliability, the Cronbach alpha was calculated for Sections C, D, E and F of the questionnaire. The coefficient alphas indicate that the reliability of the instrument is good and satisfactory as they showed values above the 0.7 benchmark (Malhotra 2010: 285) (see Table 6). Therefore, factor analysis was done for Section E and F of the questionnaire. The determination of factors to be extracted was based on eigen values (see Table 7). The KMO and Bartlett's test was also performed and considered satisfactory for the use of factor analysis (see Table 8).

The independent t-test and ANOVA was also performed to determine whether a statistical difference existed. The independent t-test was done between male and female (B1) and for the effectiveness of employee induction (Section D) (see Section 4.9). The significance

was found in some of the questions between the two groups (B1). A one-way analysis of variance was conducted to test for significance differences in Section B (B8 Total period of service) with Section D (see Table 9). A significant difference was found in some of the questions between total period of service. The findings of the research have been discussed fully in this chapter.

Chapter 5 provides a summary of important findings. The main conclusions from both the literature reviewed and the empirical findings are presented in this chapter. Furthermore, limitations and recommendations from the findings of the study and for further research are highlighted, as well as the value of this research.

5.3 DISCUSSION AND CONCLUSIONS

The main objective of the study was to determine the employee's perceptions of the effectiveness of the health and safety induction. In the light of the literature study, the theoretical objectives for this were attained through analysis of relevant literature. Chapter two presented a detailed literature review based on the theoretical objectives that were set.

The following conclusions have been drawn with regard to the stated theoretical objectives:

Objective 1: To conduct a literature study to determine the rationale for organisational induction

The evidence from the literature indicated that the hiring and selection processes played an important role in the induction process. Byars and Rue (2008:206) also believes that through the hiring and selection processes, the best candidate to join the organisation are selected. At that time, individual candidates learn about the organisation. Upon the selection process, the key for a new employee to be successful in the new positions is to

establish relationships in a new organisation through an induction programme as a process new employee go through to adjust to new organisation.

In support to theoretical finding, it can be argued that organisations have different induction practices and each organisation develops its own induction procedure. Therefore, the employees needs to be made aware as soon as they joins an organisation, through the procedures available as it will add value to the new employee when he/she starts the new job.

Objective 2: To explore the characteristics of effective induction

With regard to the characteristics of effective induction, key elements of effective induction were identified. Theoretical findings indicate the need to exposed new employees to the operation of the organisation and the manner in which it functions. Ku and Kleiner (2002:44) on the available literature indicated the purpose of the induction as to mould new employees into an employee of good standing by engaging them in an induction cannot be compromised. This indicates the contents of effective induction to provide a frame of reference for employees to understand the functions of the organisation better, and thus provide an immediate and lasting impression. Kempen (2010:115) and Kessels (2010:119) in their studies have proven induction activities to be significant in assisting the newly appointed employees. It can therefore be believed that employees cannot perform to their best potential until they become attuned to the organisation. The potential results of an induction programme, had a major impact on employee's commitment, motivation and job performance.

Objective 3: To identify the benefits associated with health and safety induction

Available literature indicate employees to be the most important resources in an organisation and have to be made aware of health and safety practices. Lashley and Best

(2002:13) state that through the induction programme employees are made aware of and introduced to what is required to ensure health and safety practices within the work context. Burt and Stevenson (2009:365) found on their studies relationship between accidents and lack of familiarity with regards to health and safety. Bentley, Parker and Ashby (2005:166) argue that the higher frequency of injuries in the initial period of employment could be due to employees' lack of familiarity and awareness with the unique characteristics of particular machinery, specific work environments, work methods and health and safety practices. In this regard, health and safety induction have been found to provide a greater awareness and understanding of health and safety issues in the work environment. The knowledge gained through health and safety induction reduces the probability of accidents occurring. It can be concluded that health and safety form a critical aspect of induction, and therefore, its benefits undoubtedly were to minimise the accident rate.

Objective 4: To investigate the implications of health and safety training during induction

The literature revealed that organisations use health and safety training as part of the induction programme. Neal (2003:123) in the literature argue that training can be a powerful tool to entrench health and safety in the organisation. It includes aspects of health and safety on how to respond to an accident, correct safety equipment, workplace plan showing medical facilities, and typical working signs, which should be included in the induction programme. In order to deal with the potential risk associated with a new employees, existing employees, assuming they recognise the health and safety risks and issues, may have a number of safety related reactions toward new employees. In terms of what is expected by the newly-recruited employees in the new work place, Burt and Stevenson (2009:366) argues health and safety training features to be added to an induction process to strike balance and cover specific risks and location of hazards in the workplace.

Objective 5: To explore the implications of the OHSA for the management of health and safety

Health and safety has been found to be a major concern for employers and employees in the workplace. Le Roux (2011:530) in the available literature indicates that employers may use various measures to ensure a reasonably safe working environment, and it is the obligation of employers to take appropriate steps to prevent injuries, illness and fatalities by providing information that underlies the basic assumptions of the OHSA. Therefore, management of health and safety must adhere to this legislation, which forms an essential part that sets out a clear direction to follow in terms of health and safety. Successful management of health and safety should be a priority in an organisation as it leads to hazards, risks and fatalities being reduced, eliminated and controlled.

Objective 6: To reflect upon the rationale for health and safety management

Health and safety management systems was found to represent a key new prevention strategy of health and safety risks. Literature indicates that hazards are the common source of health and safety problems. The identification of hazards and their resultant control measures provides the foundation for this management system. Makin and Winders (2008:953) support the statement by indicating that issues that can be identified as contributing to health and safety hazards can be related to inadequate attention to design and process, maintenance, as well as the failure to implement safety audit recommendations, and a lack of attention to the broader planning issues associated with the location of hazards in the workplace. The health and safety management systems accurately capture the health and safety needs, and control the process by creating an enabling environment. The extent to which employees follow health and safety precautions has been shown to be related to employees' perceptions of health and safety management.

A general conclusion may be drawn that the development of effective health and safety management systems was not an easy, quick, or spontaneous process. It requires sound knowledge of current health and safety management principles and systems, the resources to turn this knowledge into action, the broad and active involvement of key workplace personnel, and on-going sustenance. However, the absence of rigorous accountability and review mechanisms may inhibit further progress in its development, based on the given importance for on-going commitment in the workplace to health and safety, and ultimately, the effectiveness and sustainability of health and safety management systems.

Objective 7: To investigate the determinants of employee perception

Venter (2009:2) mentions that employees generally believe in what they see, and tend to perceive it to be true. It is through perceptual process that employees will, in fact, act or respond in accordance with the way they perceive involving feelings and actions. The literature indicates that perceptual factors that operate to shape employee impression can be related to the perceiver, the situation, or the target being observed. It is found that the determinants of employee perception play a major role in the way the employee perceives an environment and attaches meaning to it. Moreover, employees' perceptions of health and safety on the job are associated with variables related to workplace accident rates. Employees who perceive their jobs as safe tend to be involved in fewer accidents than employees who perceive their jobs as relatively more dangerous. Employees who perceive their workplace as safe report lower levels of exposure to fewer environmental variables that have been strongly linked to accident rates.

Objective 8: To explore the relationship between perceptions and resultant actions

In the discussions of the literature, it was found that actions and decisions are influenced by perceptions. Neal and Griffin (2002:32) support this argument that perception allows employees effectively to interpret what they see and hear in the workplace, to make

decisions. Therefore, perception allows employee's actions to be planned prospectively and gears actions to the environment. Lingard, Cooke and Blismas (2011:162) in literature argues that employees that engage in unsafe behaviour is a critical linking mechanism through which employee predicted health and safety behaviour. It is therefore concluded that perceptions mediate related behaviours and actions thereof. Understanding employee's perceptions is vital within an organisation to recognise resultant actions of employees.

Objective 9: To contextualise health and safety induction at ArcelorMittal (Vanderbijlpark works)

It was found in the literature that ArcelorMittal provides an on-boarding programme (induction programme), as it is called in ArcelorMittal, to support the integration of new employees. It is believed the on-boarding programme enables employees to feel a part of the organisation. Specific aspects of health and safety were covered in the ArcelorMittal induction programme, and it provided an occupational health and safety policy that reflects the company's shared vision, commitment and direction.

In support of the theoretical objectives, the empirical objectives provided detailed conclusions.

With reference to the first empirical objective, to determine employees' experiences of induction programmes they received at ArcelorMittal (Vanderbijlpark works), the results were reported in Chapter 4 (see Section 4.4, Table 3).

The findings displayed that the majority of employees were indicated to have a very good experience on their induction programmes provided by ArcelorMittal. The findings collaborate with Byrne (2010:73) with the respondents' responses that induction strongly provides an adequate special attention to put the new employees at ease, provides an

adequate amount of information to reduce uncertainty and ambiguity. This results was also consistent with what emerged from Ndebele (2013:109) study. His findings provided the empirical evidence that the induction programme was generally viewed positively. Many participants felt that the programme was well organised which created a positive impression on the employees.

These sentiments resonate well with section 2.4 (*see* chapter 2) that induction makes new employees feel welcome and comfortable, and that journey of transition is a good experience in the process of integration into the workplace (Lawson 2002:3). In the same vein, ArcelorMittal developed its induction programme enabling employees to have a good knowledge and understanding about the workplace.

The available literature whereby Dessler (2013:247) reported that induction is a process that provides new employees with information that is needed to function effectively in the organisation, the findings from Kunene (2009:63) are contrary to this. The findings revealed that induction is being compromised. It is evident through the findings that the implementation of the induction programme was not done effectively. The study brings out clearly the challenges of induction as lack of clearly stated goals for induction programme, failure to balance the needs of the employees and that of the organisation, inability to deliver appropriate and accurate information to new employees. Kebenei (2014:78) recommend that induction should be considered an integral part of that organisation. It may therefore be necessary to carry out effective induction programs to ensure the right information is given to the new entrants into the organisation.

It was concluded that the employees' induction makes an immediate and lasting impression, which greatly influences employees' sustained motivation to become successful on their jobs. Bjorck (2011:98) further indicated that an induction programme which have a positive impression have an influence on employees staying long-term at an organisation.

With regard to the second empirical objective, to gauge the effectiveness of induction programmes employees received at different stages at ArcelorMittal (Vanderbijlpark works). The results were reported in Section 4.5 (refer to Table 4) in Chapter 4.

The findings revealed that induction was consistent and effective throughout its stages. This implies that the responses with regard to the effectiveness of the induction programme employees received at ArcelorMittal suggest that employees were able to receive the required information successfully. The findings are in line with Byrne (2010:76) who indicated that most respondents agreed that their induction was effective and of sufficient duration. According to Kempen (2010:79) all participants found their start at the organisation to be challenging. This data supports the fact that all new employees experience significant challenges during their induction into the organisation. However, with effective induction they feel that their 'aeroplane' has landed. Also, this correspond with Kessels (2010:105), in this findings remarkable was that, while other respondents generally experienced only little to moderate influence of the induction programme, more than half of the respondents nevertheless fully agreed that they had been supported with a good and effective induction programme. This is in agreement with the suggestions given by Deb (2006:192) in the literature that with efforts to address problems normally associated with employees, effective induction identify the essential features and key elements in its process to provide new employees with the information they need to function effectively in the organisation.

Sutherland and Canwell (2004:135) in the literature (*see* section 2.4.2) also indicate an effective induction to be a wise investment. Therefore, it would be concluded that, to sustain and motivate employees, especially considering the huge amounts of information they had to acquire about the organisation, the induction programme had to be consistent and performed effectively to provide information successfully and to reach its desired outcomes.

The third empirical objective, which was to establish the extent of health and safety induction training received by employees at ArcelorMittal (Vanderbijlpark works), was achieved under Section 4.6 (refer to Table 5).

The findings of the study indicated that the health and safety induction programme was implemented successfully and serves the purpose of imparting critical information to employees about health and safety issues. The responses given in Waweru (2012:48) revealed that the organisation provided its employees with health and safety induction training and it served its purpose. The corresponding findings by Alhajeri (2011:114) provide a solid evidence that organisations confirmed they undertook the health and safety induction training to their new employees and how it was undertaken. Their records highlighted that induction training was undertaken every 6 months, every one year, every 3 months, every 6 months and others organisations stated they provided induction training every 2 weeks. This indicates the how much information about health and safety was provided.

The above findings collaborate with Hughes and Ferrett (2010:77) who provided evidence from the literature that health and safety induction training of employees plays an important role and is a significant representation of organisation in enhancing health and safety performance. As advocated by Lingard and Rowlingson (2005:127), the extent of induction training programme relies on the information provided about health and safety. This suggests that during health and safety induction training, employees have to be informed of safe work procedures, hazards in tasks and methods adopted to minimise impacts of exposure. This agrees with the views of Mbana (2005:42) that the knowledge gained by employees reduces the probability of accidents.

ArcelorMittal developed its health and safety induction training to instil awareness in the employees (see Section 2.15). This suggests the respondents view on health and safety

induction as significant in ensuring employees health and safety in the workplace. Employees also have to adhere to the rules to ensure their health and safety in the workplace. To do so effectively employees require knowing the rules. This implies that when employees are fully aware and have knowledge about their health and safety through health and safety induction, employees are more likely to conform to workplace regulations.

On the final empirical objective, which was to measure the effectiveness of health and safety induction that employees at ArcelorMittal (Vanderbijlpark works) undergo, the results were reported in Section 4.7 (refer to Table 6).

The study established that the health and safety induction in ArcelorMittal (Vanderbijlpark works) is effective as given by the respondents that after completion of health and safety induction; they understood OHSA, were aware of the location of health and safety documents, were familiar with the health and safety policies, they know how to communicate emergencies, were aware of safety measures, they follow safety procedures, they take reasonable care of themselves, they view health and safety as a major concern of the organisation. The findings are in line with Boysen (2004:29) findings. The respondents indicated that they are extremely knowledgeable in all health and safety requirements, and health and safety is a major concern in the organisation. This suggests the respondents view on understanding the general health and safety rules of the organisation as the ultimate objective of organisation's OSHA strategies. These sentiments resonate well with ArcelorMittal's core philosophy that health and safety of employees is their major priority. It goes without saying that any response contrary to the organisation's main objective is a matter of concern. Neale (2010:77); Eppenberger (2008:40); Vassie and Lucas (2001:485) in the literature agrees that health and safety in the workplace is vitally important. This seems to confirm the OHSAs position on the obligations of organisations to provide health and safety induction training.

Therefore, it would be concluded that the workers have complete confidence in the effectiveness of ArcelorMittal's health and safety strategies. The employees perceive this as significant in ensuring their health and safety in the workplace. Moreover, the employees also hinted at the idea that ArcelorMittal has played an instrumental role towards inculcating and protecting them in their workplace. Therefore, it is possible for ArcelorMittal to reduce workplace incidents towards zero tolerance, as the majority of the workers confirm.

5.4 LIMITATIONS OF THE STUDY

The research was a once-off study. This implies that data was only collected once and not done repeatedly. Furthermore, data collection was confined to the iron-making division. A lack of diversity, which should include other divisions was noted.

5.5 RECOMMENDATIONS FOR FUTURE RESEARCH

Limitations of this study confirmed the relevance of conducting further studies of other, more diversified populations. Suggestions and directions for future research on the subject matter are discussed below.

- The occupation health and safety induction would be shared by all workers alike and can be extrapolated to others. Future studies, therefore, can be embarked upon adding other workers of the company onto the list, besides the iron-making division, to enrich the depth of exploration.
- Future studies can also focus on a longitudinal study over an extended period of time as part of a continuous cycle of development to allow researcher to look at changes from same respondents over time.

- Consideration of a larger sample, which will also be extended to contractors as they also undergo ArcelorMittal health and safety induction, before executing any given duties, might reveal interesting findings.

5.6 RECOMMENDATIONS FOR MANAGEMENT

Further research is needed to pave the way to develop an efficient health and safety induction tool and interventions designed to target factors that have an impact on health and safety. The findings will add value by assisting ArcelorMittal with the planning and developing of their health and safety induction to meet their goal of zero tolerance in safety hazards, and further identify their internal problems or deficiencies towards health and safety. This study may also assist ArcelorMittal on how to eliminate injury and accident within their industry, and act as a step towards achieving a safer work environment. Employees of ArcelorMittal will also benefit from the findings of this study, in that these findings will assist them with better understanding the concepts relating to health and safety, as well as health and safety issues in their environment.

5.7 CONCLUSION

The purpose of the study was to determine the employees' perceptions of the effectiveness of health and safety induction. It is clear that health and safety induction impacts significantly on employees' safety as a whole. Effective health and safety induction ensures that employees are able to work safely by providing the required information based on health and safety. The results indicated that the majority of employees are aware and have been exposed to health and safety induction, which provided them with necessary information about health and safety. The study recommendations were highlighted. The finding reported in the study are expected to assist ArcelorMittal to develop an efficient health and safety induction tool to help eliminate future injuries and accidents within the organisation, thereby benefiting employees through a safe and healthy work environment.

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ANNEXURE A: PERMISSION LETTER TO CONDUCT RESEARCH

ArcelorMittal South Africa
Vanderbijlpark Works



Notice

ArcelorMittal

Date 2009-05-15

To:

Whom it may concern

From:

MANAGER, SAFETY

Mr M Samosamo permission for research

This notice serves to confirm that I had a conversation with Mr Samosamo with regard to his research on "The impact of induction on employee perception of health and safety" at ArcelorMittal South Africa, Vanderbijlpark Works. We agreed upon a questionnaire that he will provide to me after which I will send it to the relevant employees at ArcelorMittal South Africa, Vanderbijlpark Works.

The date and time for the managing of the questionnaire will be discussed when he makes it available

Yours Sincere

Stefan Bruwer
Manager, Safety
ArcelorMittal South Africa
Vanderbijlpark Works

ANNEXURE B: QUESTIONNAIRE COVER LETTER



Researcher: Mr M. G. Samosamo 0734564773
Supervisor: Mrs C. Marais 0845573804

RESEARCH PROJECT

Dear Participants

I, M Samosamo, am conducting research related to the effectiveness of health and safety induction: employees' perceptions at ArcelorMittal (Vanderbijlpark). The empirical objectives of this study are as follows:

- To ascertain the perceptions of employees of health and safety induction received by the Iron Making Division at ArcelorMittal (Vanderbijlpark works).
- To explore employee perceptions of the effectiveness of health and safety induction undergone at ArcelorMittal (Vanderbijlpark works).

You are kindly requested to complete the enclosed questionnaire yourself. Participation is voluntary. I assure you that the information will be treated with the utmost confidentiality and shall remain anonymous at all times. The responses will be used for academic purposes only.

It will take approximately 20 minutes of your time to complete the questionnaire. Please return completed questionnaires to.....

If you have any questions concerning the questionnaire or the questions you are welcome to contact the individuals mentioned above. Thank you for your time and effort in completing the questionnaire. Your input is valued.

Kind regards

.....

M. Samosamo

ANNEXURE C: SURVEY QUESTIONNAIRE

SECTION A

This section reflects upon your exposure to a health and safety induction programme.

Please mark all appropriate answers with a cross (X) in the relevant block.

A1	Are you currently working in the Iron Making Division?	YES		NO	
A2	Have you undergone an induction programme based on health and safety?	YES		NO	

If your answer to question A1 and A2 is “NO”, I thank you for time. Please return the questionnaire

If your answer to question A1 and A2 is “YES”, I request that you please answer all the questions.

A3	I attended a health and safety induction programme as newly appointed employee	YES		NO	
A4	I attended a health and safety induction programme as promoted employee	YES		NO	
A5	I attended a health and safety induction programme as transferred employee	YES		NO	
A6	I attended a health and safety induction programme as existing employee, not newly appointed, promoted or transferred	YES		NO	

SECTION B: BIOGRAPHICAL INFORMATION

This section requires your background information. Please mark the appropriate answer with a cross (X) in the relevant block.

B1	Gender							
	Male		Female					
B2	Race							
	Black African		Coloured		Indian/Asian		White	Other, specify _____
B3	Age (in years) Please specify _____							
B4	Home Language							
	Sesotho		Sepedi		Setswana		IsiZulu	IsiXhoza
	IsiSwati		IsiNdebele		Xitsonga		Tshivenda	English
	Afrikaans		Other, specify _____					
B5	Highest qualifications							
	Grade 11 or less		Grade 12		Certificate		Diploma	Degree
	Postgraduate degree			Other, specify _____				
B6	Nature of employment							
	Permanent contract			Temporary contract			Internship	
B7	Time period in current position							
	Newly appointed 6 months or less		6-12 months		1-5 years		5-10 years	More than 10 years
B8	Total period of service at ArcelorMittal							
	Less than 6 months		6-12 months		1-5 years		5-10 years	More than 10 years
B9	Occupational level at ArcelorMittal							
	Engineer		Plant operator		Technician		Machine operator	
	Supervisor		Foreman		Artisan		Graduate in training	
	Other, please specify _____							

SECTION C: THE EMPLOYEE INDUCTION

This section reflects upon your experience of induction programme as reflected by your choice in SECTION A. Please use the scale and mark the appropriate answer with a cross (X) in the relevant block.

		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
C1	I am aware of the content of the employee induction programme	1	2	3	4	5
C2	I completed an induction programme upon my arrival at ArcelorMittal	1	2	3	4	5
C3	I was informed about the date of the induction programme	1	2	3	4	5
C4	I was informed about the time of the induction programme	1	2	3	4	5
C5	I was informed about the venue of the induction programme	1	2	3	4	5
C6	I was informed about the expected outcomes of the induction programme	1	2	3	4	5
C7	I was informed about the induction programme coordinator	1	2	3	4	5
C8	I was informed about my role within an induction programme	1	2	3	4	5
C9	I was encouraged to complete the Induction Checklist at the end of the induction programme	1	2	3	4	5

SECTION D: THE EFFECTIVENESS OF EMPLOYEE INDUCTION

This section requires you to reflect upon the effectiveness of the induction you received as indicated by your choice in SECTION A. Effectiveness in this case is defined as a quality attributed by individuals to an activity perceived as having produced a desirable effect. Please use the scale and mark the appropriate answer with a cross (X) in the relevant block.

The first day: Initial Induction		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
D1	The induction I received helped me to become familiar with my new workplace	1	2	3	4	5
D2	The induction programme has helped me to do my current job more effectively	1	2	3	4	5
D3	I met my supervisor on the first day	1	2	3	4	5
D4	I was provided with the details of what is included in the employee induction programme	1	2	3	4	5
D5	I received an induction file covering induction objectives	1	2	3	4	5
D6	My induction partner (buddy) was indicated to me	1	2	3	4	5
D7	I was familiarised with my immediate work area	1	2	3	4	5
D8	I was introduced to colleagues I will be working with	1	2	3	4	5
D9	The duties of the job were discussed with me	1	2	3	4	5
D10	I was given a work area tour	1	2	3	4	5
D11	I was given instructions on procedures to follow while doing my duties	1	2	3	4	5
D12	Health and safety procedures were explained to me	1	2	3	4	5

D13	I met with my coordinator to review my progress	1	2	3	4	5
Induction within the first week						
D14	My role within ArcelorMittal was discussed in detail with me	1	2	3	4	5
D15	Information about my division was provided to me	1	2	3	4	5
D16	I met with my co-workers to discuss expectations of our working relationships	1	2	3	4	5
D17	I was provided with the details about specific tasks I was required to perform in my work context	1	2	3	4	5
D18	My facilitator provided me with continuous support while I adapted to my new circumstances	1	2	3	4	5
Induction during the first month						
D19	I gained an understanding of the rules and regulations relevant to my work	1	2	3	4	5
D20	My work progress was discussed with my immediate supervisor	1	2	3	4	5
D21	During the first month, I was provided with on-the-job training	1	2	3	4	5
Induction within the first six month period						
D22	Further training needs on the job were identified	1	2	3	4	5
D23	My supervisor scheduled meetings to discuss my performance appraisal	1	2	3	4	5
D24	I was given constructive feedback on my job performance	1	2	3	4	5
D25	I experienced the induction programme that I received as useful	1	2	3	4	5
D26	Induction programme effectively assisted me with my integration into the work context	1	2	3	4	5
D27	I felt that I was a part of ArcelorMittal after completing the employee induction programme	1	2	3	4	5

SECTION E: HEALTH AND SAFETY INDUCTION TRAINING

This section requires you to reflect upon the Health and Safety induction training you received as part of an induction programme. Please mark the appropriate answer with a cross (X) in the relevant block.

		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
E1	ArcelorMittal provided the health and safety induction training	1	2	3	4	5
E2	I was trained in health and safety procedures	1	2	3	4	5
E3	Health and safety training ensured that I received effective information about health and safety	1	2	3	4	5
E4	Health and safety policies have been explained to me during the health and safety induction training	1	2	3	4	5
E5	I was made aware of the health and safety practitioner in my department	1	2	3	4	5
E6	I was made aware of the Occupational Health Service	1	2	3	4	5
E7	I was made aware of the first aid box	1	2	3	4	5
E8	The accident reporting procedure was explained during health and safety induction training	1	2	3	4	5
E9	General workplace safety issues were discussed during the health and safety induction training	1	2	3	4	5
E10	Work with hazardous substances was explained during the health and safety induction training	1	2	3	4	5
E11	Safe use of machinery was discussed during the health and safety induction training	1	2	3	4	5
E12	Safe systems of work specific to my work context were clarified during the health and safety induction training	1	2	3	4	5
E13	The health and safety induction training informed me how to protect myself while I perform my duties	1	2	3	4	5
E14	The need for health and safety induction training was highlighted to me during the health and safety induction	1	2	3	4	5

E15	Work activities that I am not permitted to undertake were clarified to me	1	2	3	4	5
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SECTION F: THE EFFECTIVENESS OF HEALTH AND SAFETY INDUCTION

This section requires you to reflect upon the effectiveness of the Health and Safety training you received. Please mark the appropriate answer with a cross (X) in the relevant block.

After completion of health and safety induction.....		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
F1	I understand the Occupational Health and Safety Act	1	2	3	4	5
F2	I am aware of the location of the health and safety documentation	1	2	3	4	5
F3	I am familiar with the health and safety policies	1	2	3	4	5
F4	I am able to use the equipment safely within my work context	1	2	3	4	5
F5	I know how to communicate emergencies in my workplace	1	2	3	4	5
F6	I am aware of the safety measures that are taken to ensure that I am safe at the workplace	1	2	3	4	5
F7	I follow safety procedures	1	2	3	4	5
F8	I know how to recognize safety hazards	1	2	3	4	5
F9	I have been made aware of the current representatives on the Health & Safety Committee	1	2	3	4	5
F10	I am able to seek positive improvements in my own health and safety environment	1	2	3	4	5
F11	I report anything that appears dangerous within the work environment	1	2	3	4	5
F12	I take reasonable care of myself in the work environment	1	2	3	4	5

F13	I do not undertake tasks that I have not been trained to do	1	2	3	4	5
F14	I follow the advice of safety notices	1	2	3	4	5
F15	I am working in a safe work environment	1	2	3	4	5
F16	ArcelorMittal as my employer is concerned with providing a safe work environment	1	2	3	4	5
F17	Health and safety is a major concern at ArcelorMittal	1	2	3	4	5
F18	ArcelorMittal have done all that is reasonable to protect me in my workplace	1	2	3	4	5

Thank you for your participation