

UNIVERSITY OF KWAZULU-NATAL

Employee engagement to improve productivity in the management of construction projects.

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Abstract

Construction contractors want to improve productivity, employee turnover and stakeholder management on construction projects to remain competitive. Employee engagement is a tool that can drive the achievement of these goals. Disengaged employees have been linked to higher absenteeism and turnover, lower attention to detail and lack of team integration, aspects that all impact negatively on project performance/productivity. At the heart of every project is a main contracting firm and leading their team is a construction manager. The construction manager is responsible for ensuring projects are well delivered and all stakeholders' needs are met. Construction managers play a key role in project delivery and therefore their engagement in their work and their focus on the right type of work has a significant impact on the outcomes of construction projects. Disengaged construction managers risk poor project execution and unnecessary losses for a main contractor. Literature has shown that employee engagement when used correctly can significantly improve employee turnover and create higher job satisfaction. This study assessed the existing levels of employee engagement and perception of job design of construction managers within an existing major construction contractor. Through a review of literature, the study moreover identified critical work activities of construction managers for successful project delivery. The study used a quantitative approach and made use of an electronic email survey for primary data collection. A census survey was conducted, and data was collected from the full population of 11 construction managers. Data was analysed using SPSS. The data was presented in a combination of frequency and descriptive statistics. Overall employee engagement levels were found to be high amongst respondents. The lowest composite measure was for employee loyalty and the highest was for employee commitment. Perceptions of job design attributes were also high indicating that the work of construction managers is well designed. Information and processing achieved the highest rating while task significance scored the lowest. Recommendations to assist in increasing existing levels of employee engagement and job design included, greater commitment from organisational leadership to drive the agenda, training and career development and planning.

Key words: Employee engagement, job design, construction managers

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Chapter 1. Introduction and synopsis of the study

1.1 Introduction

Employee engagement is a concept that has found favour (and in some cases criticism) in the field of human resource management (Markos and Sridevi, 2010, Saks and Gruman, 2011, Albrecht, Bakker, Gruman, Macey & Saks, 2015, Lawler, 2017). Job design is a construct that plays an important role in maximising employee performance (Gallagher and Einhorn, 1976, Zareen, Razzaq & Mujtaba, 2013). Both employee engagement and job design have been used by several employers and HR practitioners to optimise their employees and increase the business' competitive advantage. Authors (Garg and Rastogi, 2006, Lockwood, 2007, Masvaure and Maharaj, 2014, Dromey, 2014b, MacLeod and Clarke, 2009, Pfeffer and Jeffrey, 1998, Kahn, 2010) have argued that people are a company's greatest asset and as such should be well taken care of, employee engagement practices combined with job design are a way of achieving that goal.

This study assesses the level of employee engagement and the perception of job design of construction managers within an existing construction company in the KZN region. The purpose of the study is to determine where employee engagement and job design can be improved so that productivity is impacted positively.

This chapter gives background on the challenges in the construction industry and emphasises the need for employee engagement and consideration of job design for construction managers. It out lays the research problem, the purpose of the study, the significance of the study, research objectives and a brief description of the research design. This chapter also gives an overview of chapters in this research study.

1.2 A view into Construction

Construction projects are required faster, cheaper and with the highest quality. Several activities take place in parallel and back to back with the coordination of many stakeholders to achieve project objectives. With majority of construction work being labour intensive, better management of people can be a great source of competitive advantage for a contractor. At the heart of every project is a main contracting firm and leading their team is a construction manager. The construction manager is responsible for ensuring projects are delivered well and all stakeholders' needs are met.

The way main contractors work has changed with time. The shortage of technical skills (Windapo, 2016) and a need for employees to be better connected to the organisation has led to contractors seeking to adopt a new focus on job and organisational design (Egan, 1998a). Clients demanding collaboration among construction teams, improvement on health and safety, upgrading of working conditions and the discarding of the “long work hour’s” culture is forcing contractors to work more effectively together and in partnership to meet client expectations (Egan, 2002a)

Construction contractors want to improve productivity, employee turnover and stakeholder management on construction projects to remain competitive. Employee engagement is an instrument that can drive the achievement of these goals (Markos and Sridevi, 2010). Disengaged employees have been linked to higher absenteeism and turnover, lower attention to detail and lack of team integration, aspects that all impact negatively on project performance/productivity (Pech and Slade, 2006, Wilson 2014, Rastogi, Pati, Krishnan & Krishnan 2018).

1.2.1 Employee engagement brief overview

According to Albrecht (2010a) employee engagement is a “positive work-related psychological state characterized by a genuine willingness to contribute to organisational success” (p.5). The construct is understood broadly as one that involves what Kahn (2010) describes simply as “people working hard and caring about their work” (p.20). According to Kahn (2010) engagement is expressed not only in effort, what people actually do, but also in including “real selves” into work. One’s real self is expressed when we say what we think and feel as we go about our work and are committed to our work. This commitment is expressed when employees focus on their tasks and show care when fulfilling their duties.

There is great support for the concept and antecedents of employee engagement (Schaufeli and Salanova, 2007, Schaufeli, 2013, Saks, 2006, Kahn, 1992, Kahn, 2010, Anitha, 2014, Albrecht et al., 2015). Recently, there is also a community of researchers that contend the significance of engagement. To them engagement is a mere fad that is likely to disappear from organisational discourse and practice (Schneider and Blankenship, 2017, Lawler III, 2017, Levenson and Fink, 2017).

1.2.2 Construction managers, the work environment, job design and engagement

Construction managers play a key role in project delivery and thus their engagement in their work and their focus on the right type of work has a significant impact on the outcomes of construction projects (Pinto and Mantel, 1990, Shahhossein, Afshar, & Amiri, 2018). Construction managers spend a minimum of 9 hours of the day in the workplace. This is more time than is likely spent with family or doing leisure activities. Because construction managers spend more time with their co-workers at work, these co-workers have an opportunity to affect individual behaviour. Creating an organisational climate that is conducive to engagement is therefore a priority for any contracting firm seeking to improve productivity.

A connection exists between good job design and high levels of engagement (Shantz et al., 2013, Bakker and Demerouti, 2007). Several authors advocate for this argument (Zareen et al., 2013, Bakker and Demerouti, 2007, Shantz et al., 2013, Christian et al., 2011), simply put, when an employee knows what to do they are more likely to be productive. Not knowing what to do or what is expected leads to confusion and frustration. Task performance is improved when a job is well designed, which impacts on employee perceptions (Zareen et al., 2013) and ultimately leads to engagement.

When employees are engaged the work environment tends to be a more positive environment. When employees are disengaged the tendency is to find a more distracting and demoralizing work environment (Attridge, 2009, Macey and Schneider, 2008a). Engaged employees show up, they stay longer and are more productive overall. Disengagement shows signs of high absenteeism and staff turnover which can negatively impact on profits.

The quest for competitive advantage has led companies to actively find ways to achieve greater efficiencies and productivity (Markos and Sridevi, 2010, Cardus, 2013). Productivity is about doing less to achieve the same goals rather than doing more. This has always been a goal of many companies however the business landscape has changed, and organisations are constantly having to adapt.

1.3 Research problem statement and motivation for the study

While the benefits of employee engagement (Kahn, 1990, Kumar and Pansari, 2015, Council, 2004, Al Mehrzi and Singh, 2016, Albrecht, 2010b, Anitha, 2014) and job design (Crawford et al., 2010, Demerouti and Bakker, 2011, Garg and Rastogi, 2006, Kempner and Wild, 1973, Moreland, 2013, Zareen et al., 2013) are extensively researched little research exists about employee engagement levels and job design's contribution to increased productivity on construction projects (Egan, 1998b, Egan, 2002b). Given the labour intensive nature of construction and the demands the industry makes on contractors to find means of competitive advantage, the requirement to determine how improving existing employee engagement and job design can increase productivity of construction managers is necessary (Doloi, 2013). Construction managers play a key role in project delivery and therefore their engagement in their work and their focus on the right type of work has a significant impact on the outcomes of construction projects (Pinto and Mantel, 1990, Shahhossein et al., 2018). Disengaged construction managers risk poor project execution and unnecessary losses for a main contractor (Attridge, 2009).

The study was chosen to assess the existing perceptions and attitudes of the construction managers within the specific contracting firm with a focus on employee engagement and job design. Prior to this study, employee engagement levels and job design had never been measured and senior management in the contracting firm had no foundation or understanding of employee perceptions in this respect.

1.4 Significance of the Study

As mentioned previously, construction managers are critical to the success of a project. Their level of productivity is vital for sustained competitive advantage within construction contracting firms. This study measured the existing levels of employee engagement and the perception of job design in construction managers in an existing construction contracting firm. The results will give senior management insight into the existing levels of engagement and structure of job design as experienced specifically by construction managers. Capturing employee perceptions in this way and comparing it with existing literature can point out where improvements can be made as well as identify which aspects of each concept can improve productivity of the construction managers so that employee engagement is maximized.

Establishing the improvement areas will contribute to closing the gap in literature that divides views on the ability of engagement to positively affect productivity in the construction context. This outcome will also assist other construction contractors to clearly see the value of the measurement and implementation of employee engagement.

1.5 Purpose of the study

The study aims to identify where improvements in employee engagement and job design can be made so that they positively impact on the productivity of construction managers within a particular, major construction contractor.

1.6 Location of the study

The study took place at the KwaZulu Natal division of a major construction contractor in Durban, South Africa. The study focused on employee engagement at the construction management level.

1.7 Research Objectives

- To establish existing engagement levels of construction managers in the major construction contracting firm.
- To determine current job design for construction managers and its impact on employee engagement.
- To identify critical activities in the work of construction managers that are required for successful project delivery.
- To identify improvement areas in current employee engagement that will positively impact on performance/ productivity of construction managers.

1.8 Research Questions

- What are the current levels of employee engagement of construction managers within the major construction contracting firm?
- What is the current job design of construction managers in the firm and how does this impact on their level of engagement?
- What work activities of construction managers are deemed critical for successful delivery of projects?

- What can be improved in the current engagement levels that will improve construction manager performance and result in successful project delivery?

1.9 Overview of the limitations of the study

The study was conducted in a single organisation – a major construction contractor in KZN. The employee engagement and job design attribute data were collected only from the construction managers in the operations department of the company. The study was limited by time for its conduction and the availability of respondents as they were dispersed across various construction sites within the KZN region.

1.10 Organisation of the study

- Chapter 1. Introduction – This chapter provides the background and an overview of the study. It presents the research problem, the research objectives and, a brief discussion on the research design.
- Chapter 2. Literature review – This chapter examines the theoretical framework underpinning the study as well as review of the literature available on employee engagement, job design and critical work activities for construction managers.
- Chapter 3. Research methodology - This chapter presents the research design and method incorporated in this study. It details how data was collected and what ethical considerations were made.
- Chapter 4. Presentation of results – Primary data and an in-depth analysis thereof is presented in this chapter. Findings are then discussed per objective.
- Chapter 5. Conclusion and recommendations - This chapter summarises the study and presents recommendations for action to address the problem.

1.11 Conclusion

In this chapter a background and overview to the construction industry, and an outline to the concepts of employee engagement, and job design were introduced. The purpose and significance of the study were presented. The chapter outlined the research objectives and questions as well as a brief overview of the research design. The next chapter presents the review of literature on employee engagement and job design, and critical work activities of construction managers.

Chapter 2 Literature Review

2.1. Introduction

Construction contractors are finding themselves in highly competitive business environment. This case rings true for many employers across several industries. *“Any company trying to compete...must figure out a way to engage the mind of every employee.”* – Jack Welch CEO of General Electric. As human resource practices seek to get the most out of their employees, effort is put into employee engagement as a tool to drive the objective (Albrecht et al., 2015, Jones, 2011). Concurrently, being engaged in work requires that the work is designed in a way that promotes engagement. When work is poorly designed employees tend to suffer which has a negative effect on the business (Kempner and Wild, 1973). Job design and employee engagement are two concepts that are co-dependant. When practiced correctly both can positively impact employee productivity (Harju, Hakanen, & Schaufeli, 2016).

This chapter firstly explores the theoretical framework and existing literature on employee engagement and job design. The purpose of the chapter is to gain insight into employee engagement, job design and to understand the work activities of construction managers. It discusses the concepts of employee engagement in general terms and focuses on aspects of job design and critical work activities specific to construction managers.

2.2. The history of engagement

The idea of engagement in the work environment was first introduced by Kahn (1990) from the supposition that people use different degrees of themselves in the roles they perform in daily organisational life. Kahn (1990) research premise was that the psychological experience of work determines people's attitudes and behaviour and that individual, social, group, intergroup and organisational factors influence these experiences (Kahn, 1990). Kahn (1990) identified three psychological aspects (physical, cognitive and emotional) that influence the degrees to which people occupy their specific work roles. Using grounded theory Kahn put forward new terms to describe two states individuals experience in the ebb and flow of daily work life; personal engagement and personal disengagement.

Personal engagement is described as “the channeling of organisations members’ selves to their work roles; in engagement, individuals employ and express themselves emotionally, physically, and cognitively, during role performances.” (Kahn, 1990 p. 694). Personal disengagement is described as “the separation of selves from work roles; in disengagement, people defend and withdraw themselves emotionally, physically, and cognitively during role performances.” (Kahn, 1990 p694).

Kahn (1990) concluded that when individuals display personally engaging behaviours, they bring the best of themselves to their roles. They are physically involved in tasks, cognitively vigilant and create empathetic connections with others, and in the work they are doing. On the other hand, individuals displaying disengaging behaviours become cognitively unvigilant, physically indifferent in tasks, and emotionally detached from those around them in the workspace (Kahn, 1990).

2.3. Theoretical Frameworks

Saunders, Lewis and Thornhill (2016) describe theory as the “formulation regarding the cause and effect relationships between two or more variables which may or may not have been tested” (p. 729). A theoretical framework is therefore a theory that has been developed, used, tested and recognized by the research community. It includes the aspects of what and how in variables and describes the nature of their relationship but it also uses logical reasoning to explain why these relationships exist (Saunders et al., 2016). The explanations developed in a proven theory allow for predictions about new outcomes to be made based on the manipulation of the exiting variables within that theory. Theoretical frameworks inform research questions and research objectives such that a researcher arrives at theoretical explanations and not mere descriptive answers at the end of the research process (Saunders et al., 2016).

2.3.1. Resource-based View (RBV)

Priem and Butler (2001a) citing Wernefelt (1984) remind managers that according to RBV, the bundle of assets in an organisation are the heart of its competitive advantage. The focus of this view is on the characteristics of a firm’s resources that can promote sustainable competitive advantage. Because resources contribute to diversification, this diversification needs to match the firm’s fundamental competencies to realise optimal performance (Priem and Butler, 2001b). When a resource is heterogeneous in nature, strategic options are created for an organisation that allows

them to exploit economic opportunities (Priem and Butler, 2001a). In the resource-based theory, unique human resources and skills allow unique value-creation strategies. Figure 1-1 depicts the RBV diagrammatically.

According to Wernerfelt (1984) people are a firm's resource. His description of a resource is “*anything that could be thought of as a strength or a weakness of a given firm*” – (p172). Building on the work of Wernerfelt, Mahoney and Pandian (1992) further describe workers as being a firm-specific resource; if that worker holds knowledge and skills that are specific to the firm they work for, it creates added value. In their opinion, an organisation that has the strategic aptitude to coordinate and focus the human effort and the capability to effectively appraise the resource position of the business in terms of strengths and weaknesses, has a solid basis for competitive advantage (Mahoney and Pandian, 1992). Advantage can therefore be achieved by making better use of resources. This can be achieved through employee engagement (Anitha, 2014) and job design (Attridge, 2009) .

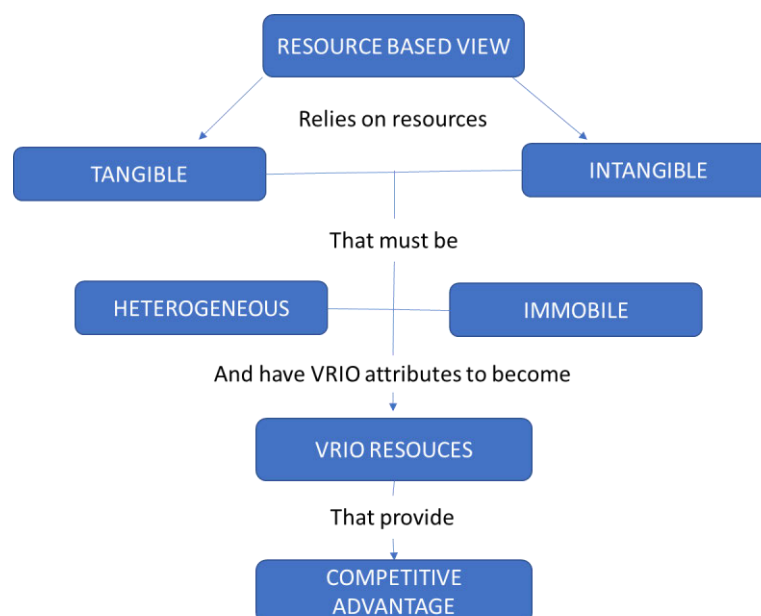


Figure 2-1: Diagrammatical illustration of RBV. Source: Adapted from Jurevicius, O. 2013. Resource Based View [Online]. Online: Strategic Management Insights.

2.3.2. COR Theory and Social Support

Another theoretical framework linked to employee engagement is the Conservation of Resource (COR) theory that was first presented by Hobfoll (1988). The definition of resources within this theory is, something of value to an individual, or from which value

can be obtained by an individual. The theory underlines the motivational principle that people endeavor to gain and guard their personal and social resources and that they experience stress when situations threaten or result in loss of these valued positions (Hobfoll et al., 1990). According to Hobfoll (1989) stress occurs when 1) there is a risk of the net loss of resources, 2) resources are truly lost and 3) there is an inability to obtain resources proportionate with the previous investment of resources.

Social support is defined as "...those social interactions or relationships that provide individuals with actual assistance or with a feeling of attachment to a person or group that is perceived as caring or loving." (Hobfoll et al., 1990 :467, Hupcey, 1998). Individuals will exert effort in order to maintain their social support to preserve and protect their resources and identity (Hobfoll et al., 1990).

Extending the theory to an organisational level, COR theory and social support theory, endorse employee engagement (Harju et al., 2016, Widiyanto and Wilderom, 2017) as a tool that can be used to enhance an organisation's human resources and reinforce these resources against future loss through disengagement. COR theory acknowledges that costs are incurred in order to maintain or prevent future losses of resources and supports the view that engagement fluctuates over time and in different situations.

2.3.3. Job demands-resources (JD-R) Model

The job demand-resources model (see Figure 2-1) was proposed and tested by Demerouti, Bakker, Nachreiner, and Schaufeli (2001). This theoretical framework has been widely cited as a model for work engagement (Albrecht, 2010a, Nahrgang et al., 2011, Shantz et al., 2013, Menguc et al., 2013). The theory profiles job demands from job resources and how they influence employee well-being (Demerouti et al., 2001). A proposal by Bakker and Demerouti (2007) is that job resources have the potential to result in exceptional performance and high engagement, and that work engagement is influenced when job demands are high (Bakker and Demerouti, 2007, Crawford et al., 2010).

Demerouti et al. (2001) describes job demands as "...those organisational, social or physical characteristics of the job that require constant mental or physical effort and are thus associated with certain psychological and physiological costs for example exhaustion, work pressure and interacting with difficult clients." (p.501). Job resources

are described as “...those social, psychological, physical or organizational characteristics of the job that may (a) be practical in achieving work goals, (b) reduce job demands at the related psychological and physiological costs (c) encourage personal growth and development.” (p.501). An example of job resources is career opportunity, supervisor and colleague support and contribution to decision making.

Figure 2-1 illustrates how increases in job demands lead to strain/stress for the employee and increased job resources increases employee motivation. Strain negatively impacts organisational outcomes, while motivation has a positive impact on outcomes.

Bakker and Demerouti (2007) split the concepts of job resources into job resources and personal resources. Personal resources: optimism, resilience, and self-efficacy. Job resources: autonomy, feedback and supervisor support. These two categories' impact over work engagement influences downstream outcomes like creativity, in-role performance, financial returns, and extra-role performance (Bakker and Demerouti, 2007). The JD-R model was utilized to improve employee well-being (van den Tooren and de Jong, 2014, Bakker and Demerouti, 2007) and performance (Bakker and Demerouti, 2007, Demerouti and Bakker, 2011).

The COR Theory and social support focus mainly on the individual employee but with costs to the organisation (Hobfoll, 1989, Hobfoll et al., 1990). The JDR model also focuses on the individual employee's experience of their job and its impact on their well-being (Demerouti et al., 2001). This study was conducted within a single organisation who's ultimate objective is to create value from its resources (Wernerfelt, 1984). According to RBV using existing resources in a new way allows for external opportunities to be exploited. The research questions in this revolve around the impact of a selected group of employee perceptions on the organisations core business – construction projects. Employee engagement and job design when used correctly can contribute to maintenance of the unique human resources (construction managers) and allow an organisation (main contractor) to gain competitive advantage through increased productivity on construction site. For these reasons the Resource Based View is the theory that best informs this study.

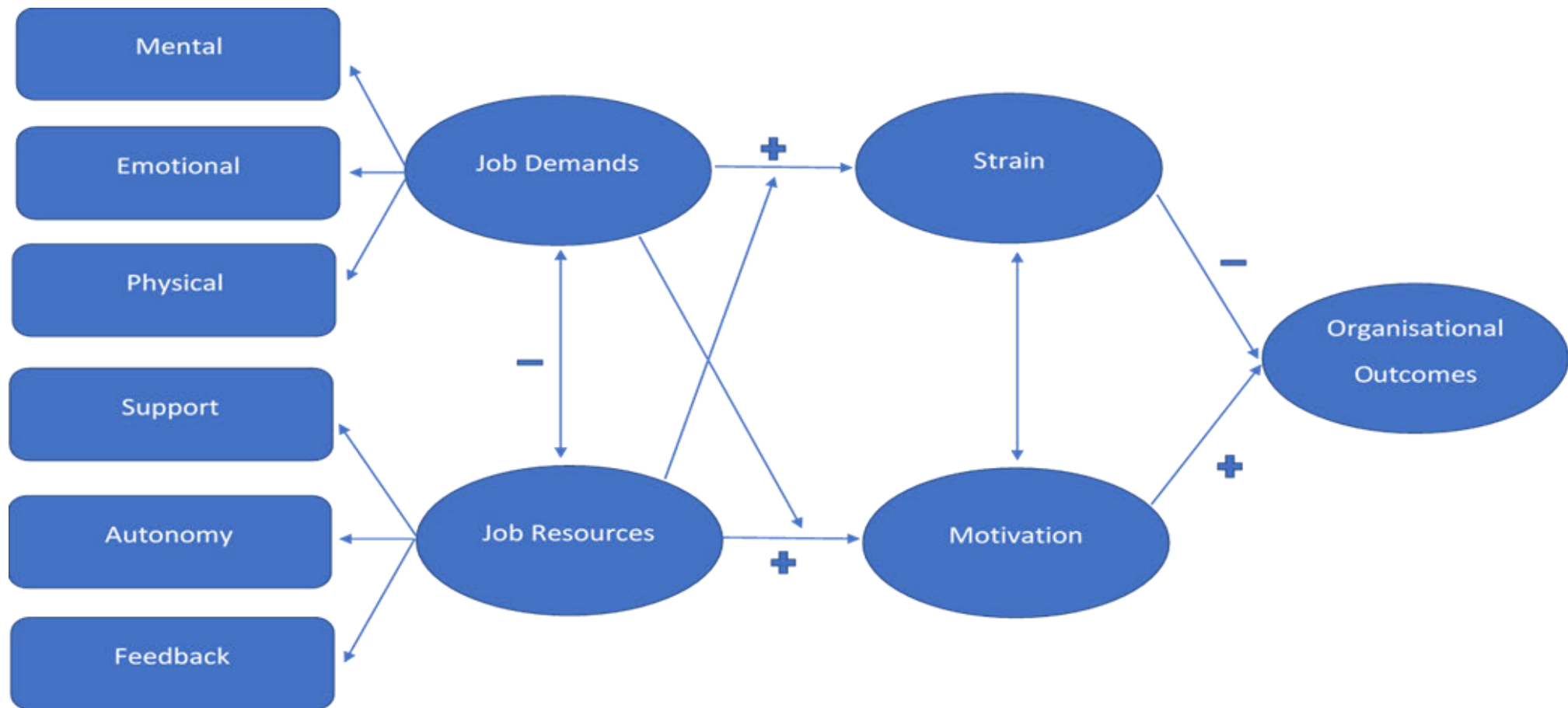


Figure 2-2 The Job demands resources model

Adapted from Bakker, A. B. & Demerouti, E. 2007. The Job Demands-Resources model: state of the art. *Journal of managerial psychology*, 22, 309-328. p.313.

2.4. Engagement in the work place and psychological presence

In the discussion on RBV it was established that people are a resource capable of being used to achieve sustainable competitive advantage, as such it is understandable that emphasis is being put on the individual and general components of plugging into people's rations of energies and effort fully guiding those energies towards achieving organisational goals. Kahn (1992) introduced the concept of psychological presence with an emphasis on the individual and their full presence in the occupation of a particular role in an organisation – personal accessibility to their work, to others and to themselves.

Kahn (1992) defines psychological presence as "...the observed state that comes with personally engaging behaviours". (p.322). This concept is applicable to work motivation: at work the more present an employee is, the more meaning they experience in their tasks and the more effort they employ (Kahn, 1992). With the business environment being increasingly competitive, increased involvement by employees; their ideas, creativity, self-expression and questioning can greatly assist the organisation in navigating the business environment better and in achieving competitive advantage (Kahn, 1992).

Kahn (1992) documented four facets of psychological presence these are briefly described as;

- Attentiveness – being open rather than closed to others
- Connection – Empathy with people in various situations
- Integration – Feeling complete or whole in each situation
- Focus – Ability to look at the here and now

According to Kahn (1992) when workers are psychologically present and fully engaged in their jobs they make financial savings, identify flawed procedures and assumptions, create new techniques and products, and work together, all to the benefit of organization. However, being fully present requires an organization to balance and cope with numerous of voices, ideas, energies and feelings (Kahn, 1992). The choice to be fully present by an employee is also shaped by both external and internal factors that affect the limit to which full presence can be achieved. Concepts such as work-life balance and job burnt out diminish the expectation of continuous full presence,

because even highly engaged employees occasionally become exhausted (Kahn, 1992, Demerouti et al., 2001, Bakker and Demerouti, 2007).

2.4.1. Defining employee engagement

Several definitions for the concept exist in literature with consensus being that the notion is a "...desired condition, has an organizational function, and signifies commitment, involvement, passion, zeal, energy, and focused effort, so it has both attitudinal and behavioral components" (Macey and Schneider, 2008a p4, Saks, 2006).

Schaufeli, Salanova, González-Romá & Bakker (2002) classify engagement as "a work -related state of mind that fulfilling, positive, and that is characterized by dedication, absorption and vigor" (p.74).

The Corporate Leadership Council (2004) describes engagement as "...the degree to which personnel commit to someone or something in their organisation, how much and how hard they work, and how long they remain as a result of that commitment" (p.5).

Kahn (2010) puts engagement as a broad construct that involves "people working hard and caring about their work" (p20). According to Kahn (2010) engagement is expressed not only in effort, what people actually do, but also in including "real selves" into work. One's real self is expressed when we say what we think and feel as we go about our work and are committed to our work. Commitment is expressed when employees focus on their tasks and show care when fulfilling their duties.

Employee engagement exists when individuals bring their best and most important selves to work (Schneider and Blankenship, 2018, Anitha, 2014). The founding blocks of employee engagement are two way communication, integrity and trust between the organisation and its employees (Anitha, 2014).

Gallup Inc. an American based analytics and management consulting firm, introduced the concept of employee engagement when they set out to determine if engaged employees did indeed drive positive outcomes (Buckingham and Coffman, 1999). They conducted research across 2500 business units and 24 companies capturing

data from 105000 employees (Buckingham and Coffman, 1999). 12 questions were asked and the business outcomes assessed were productivity, profit, retention and customer service.

Gallup made the following findings:

- Employees with optimistic responses operated in business departments which had greater levels of retention, productivity, customer satisfaction, and profit.
- Employees had graded questions differently dependent on which department they operated in instead of which company.
- The manager – not remuneration, benefits, incentives or corporate leadership - was crucial in developing a robust work place.

The first finding established an association between employee opinion and business department performance. The second found that the opinions of employees were formed by the employees' immediate manager and not by company procedure and policies. The third finding emphasized the key role played by managers (Buckingham and Coffman, 1999). May, Gilson, & Harter (2004) building on the work of Kahn (1990) explored the determinants of psychological presence – safety, availability, and meaningfulness. It was found that all three conditions were positively related to engagement and meaningfulness demonstrated the greatest association

Bilmes (2003) identified eight steps that emphasize people and improve engagement. These steps are:

1. Top level commitment – Leaders must be dedicated to the aim and drive it from the top
2. Workforce development planning – Take effort and time to assess the workforce needs frequently – this assists the company in planning for necessary training, career development, performance evaluation and bench mark current skills level.
3. Develop versatility – Skills improvements need to be well considered and matched against the needs of the business and the workers. This development needs to be

used to become more versatile – E.g. training building engineers in construction of roads to diversify and upskill them.

4. Training - Training is regarded by employees as a proof of their value to the company – training must be related to career and personal development
5. Retain good workers - Keep your top performers
6. Structure work – structured work is enjoyed by employees. Decentralized decision making and flat hierarchies.
7. Reward success – Link performance with compensation
8. Communicate

Kahn (2010) identifies lessons learned in the field of employee engagement:

- *“We use our voices when they are likely to be heard*
- *We bring ourselves into roles whose tasks and boundaries are quite clear and fit who we wish to be*
- *We participate in roles that reward us in currencies that we appreciate*
- *We allow ourselves to engage with others when we find that our interactions matter*
- *We participate in the context of systems that we find sensible, predictable and trustworthy”*

Albrecht et al. (2015) remarks that the levels of engagement were found to still be considerably low despite the amount of progress that has been made in the research field of engagement. Dromey (2014a) contends that employee engagement is absolutely essential for organisational success. The findings of his research and research by Anitha (2014) gives evidence that greater scores on enablers/determinants of engagement, show a positive outlook by employers on both their labour productivity and financial performance. Leading them to concur that effectively engaging staff should be of importance for employers.

Albrecht, Bakker, Gruman, Macey and Saks (2015) note that employee engagement has been found to influence:

- Job crafting behaviour
- The extent to which employees express their ideas, suggestions and concerns
- A variety of attitudinal, behavioural, performance and commercial outcomes

A global study of 50000 employees around the world found that employees who showed 87% less likely to leave the organisation however the most commitment performed 20% better and were (Council, 2004). They found 10% of employees was fully disengaged meaning they're actively dissented to someone or something within their organisations.

They also found that levels of engagement could not be segmented into different groups but rather a result of individuals (Council, 2004). Company strategies and policies were also found to be determinants of engagement levels rather than the concept of groups or segments sequence.

In this study, the manager was found to be a very important enabler in the workforce's commitment to their teams, to their jobs, and the organisation. The top most driver for employee engagement was the link between the organisational strategy and the employee's job.

To create and sustain a high engagement workforce the Council (2004) suggest four critical leverage points:

- Culture
- Engagement barriers
- Key contributors
- Business risks

Researchers agree that the level of engagement of an employee varies over time (Kahn, 2010, Kahn, 1990, Kahn, 1992, Fleck and Inceoglu, 2010), this as a result of situational changes like a new promotion or overall organizational restructuring. The levels of engagement are also shaped by factors outside of the work environment, like coping with issues in personal lives that diminish energy levels or further motivate individuals.

Fleck and Inceoglu (2010) developed a model that offers a definition of engagement and locates engagement in relation to its predictors and consequences (see Figure 2-2). Fleck and Inceoglu (2010) define engagement as a state, with varying intensities over time, that people are in when doing their work. They argue that some behaviours associated with engagement such as hard work, extra-role contributions and professed intentions to stay can be as a result of situational factors such as fear of job safety. As such, high levels of measured engagement skew the reality. To avoid this ambiguity, Fleck and Inceoglu (2010) propose the treatment of engagement as a state; separate from expected behaviours considered consequential to that state of engagement.

The model depicts drivers of employee engagement – the characteristics of the work environment. When the fit is good, higher levels of engagement are predicted. The higher levels of engagement result in performances that work for the good of the organisation as well as the employee. When the larger proportion of the workforce is more engaged, their behaviour is more likely to produce a positive impact on revenue, profitability, turnover and customer satisfaction. Employees will experience higher levels of job satisfaction and increases in career progression. Fleck and Inceoglu (2010) acknowledge that each employee is unique and personal dispositions will influence elements of the model.

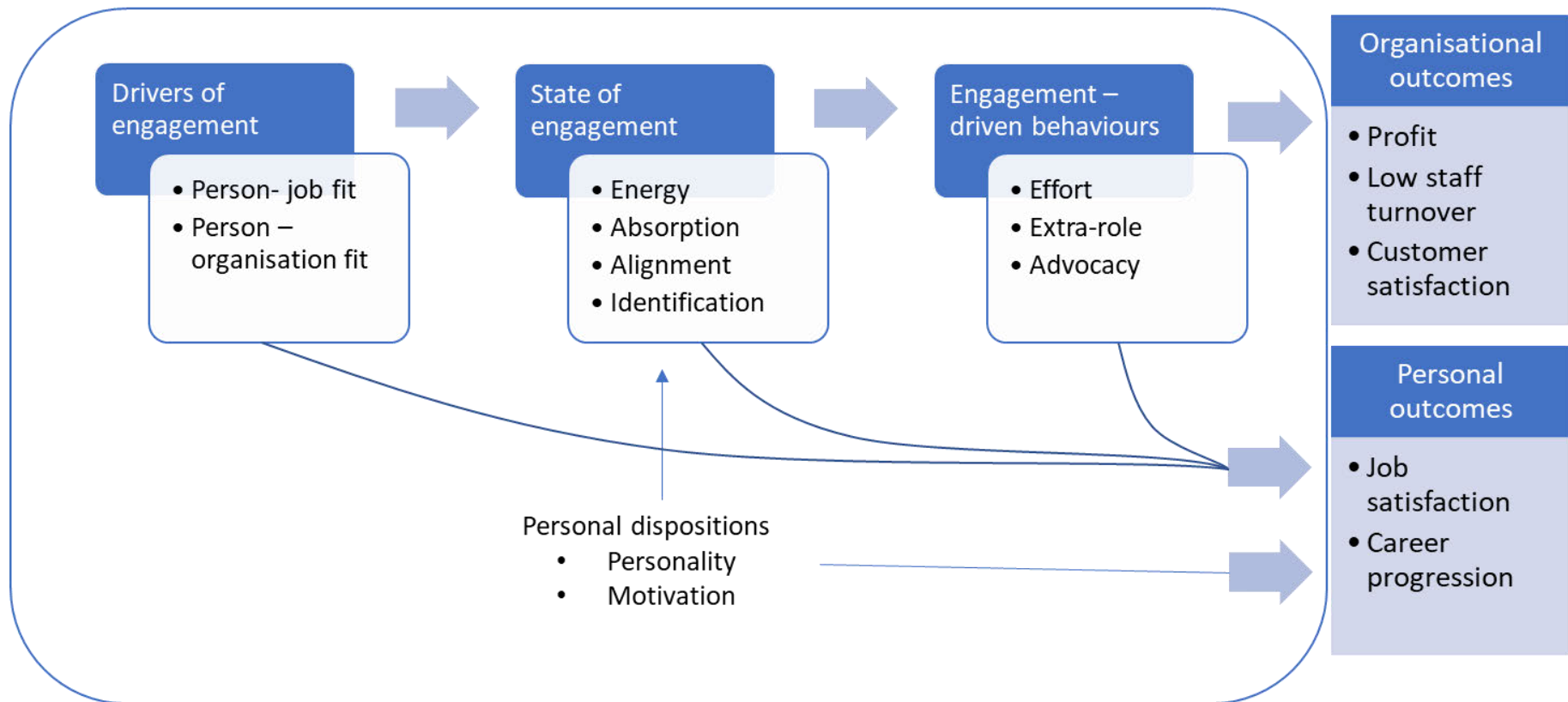


Figure 2-3 Model of engagement

Adapted from Fleck, S. & Inceoglu, I. 2010. A comprehensive framework for understanding and predicting engagement. In: Albrecht, S. L. (ed.) Handbook of employee engagement - perspectives, issues, research and practice. Cheltenham, UK: Edward Elgar. p33

2.4.2. Construction industry and the need for engagement

In 1998 Sir John Egan as chair of the UK construction task force was mandated by the Minister to consider ways, and report on, how the whole UK construction process could be transformed into a better more efficiently managed industry. Research and assessments were done across the industry involving several stakeholders and five key drivers were identified that could be the catalyst for change in the construction industry overall (Egan, 1998b). These drivers are a customer focus, commitment to people, a quality driven agenda, committed leadership, and integrated processes and teams (Egan, 1998a, Egan, 2002a)

Egan (1998a) noted that the construction industry failed to recognize that its people were and still are its greatest asset. The consequence of this failure was lost value for the client and profits for the organisation. The task force found that talent both within each organisation and from external contributors such as suppliers was being wasted because construction contractors did not recognize the innovation that could come from engaging with individual employees and significant contributors.

In his 2002 report titled 'Accelerating Change', Egan emphasizes the inability of the industry to attract the best people and as such has led to an aging workforce with few new skilled entrants to take over. The recommendation to industry participants is to value their workforce and understand how the industry is perceived by them as a means to gain an understanding of their workforce's concerns and address them. The task force encourages engagement by the employer of the employee, to collect intelligence of their work experience and support better business and project performance. A model was created for the enhancement of employee engagement in the UK construction industry which adopters found to be achieving great results and significant improvements in the efficiency and quality of construction (Egan, 2002).

Research by Dromey (2014a) found that when compared to other industries, construction showed significantly higher levels organisational commitment and of engagement. The UK construction task Force are certain that if an organisation wants to experience change, they must start by valuing their people. In their opinion construction workers are under-valued, under-resourced and constantly treated as a commodity. This view is not shared by the construction industry alone, research done

in the areas of people management also establish that people are a company's greatest asset, yet people are the worst managed.

Bilmes (2003) and Becker, Huselid, & Ulrich (2003) agree with Egan (1998) in their respective industries, that there is a shortage of talent yet people are treated like overheads that need to be reduced. Like Egan, they are of the belief that human capital should be better managed and in doing so, they can be a source of competitive advantage. Berney (2014) points out that organisational structures and processes have to be in place to enable employees to give of their best. This can be done through engagement and failure to engage and motivate affects the performance of the whole team.

Research by Bilmes (2003), also indicated that motivated workers make an organisation more money. Her research advocates for the implementation of employee engagement as means to increase employee satisfaction and loyalty as well as increase shareholder returns. Bilmes (2003) recognizes that an organisation will have to forgo short-term profits if they seek to achieve long-term success with regards to employee engagement, this is due to the slow emergence of people factor benefits. Employee engagement is not the easiest action, it requires intentional allocation of resources as well as support and involvement at all levels (Fenton-O'Creevy, 2003)

Dromey (2014) citing Rayton (2012) concurs that employee engagement is definitely associated to organisational performance and productivity, employee retention and well-being, and customer satisfaction.

Fenton-O'Creevy (2003) gives a contrasting view on engagement. Up to this stage, most views have been mutually beneficial for both employee and employer. In this researcher's opinion, employee engagement is a form of control of management over workers. His work establishes that greater control can be gained using engagement. The study questions the control of what is achieved and how it is achieved. Findings show that when control is given to workers on how to achieve their goals, those goals can be achieved easier. This is dependent on the employee understanding their contributions towards the objectives and their capability to achieve them. Interesting to note is that Fenton O'Creevy (2003) questions whether employee engagement is used by organisations to address the threat of strike action or labour unrest as a means of appeasing the workforce only to reduce engagement once the threat has passed.

Recently skepticism has arisen about the concept of engagement (Lawler III, 2017, Schneider and Blankenship, 2018). Lawler III (2017) suggests that some research indicators of an effective organisation are not in fact drivers but weak consequences that positively impact performance. His argument is against employee engagement and in favour of motivation as the key to improve productivity. His reasoning is conflicting conclusions in the studies between the relationship between attitudes and behaviours when it comes to engagement. In his view research on indicators of employee engagement such as attitudes, performance, turnover and corporate performance were thoroughly researched and concluded on prior to the introduction of the concept of employee engagement. Lawler III (2017) establishes a limitation in the employee engagement surveys – that limitation is that there is no clear indication of what can be done to improve organisational performance and how individuals are likely to be performing.

There is a lot of research indicating how an alarming majority of the workforce is disengaged (Pech and Slade, 2006, Damman et al., 2013, Rastogi et al., 2018, Wilson, 2014, Wollard, 2011). Schneider and Blankenship (2017) confirms there are profits to be made from employee engagement. They concluded that, early research has companies trying to tap into how employees were experiencing their work and then finding ways to improve that experience to exploit its benefits of greater productivity. Initial focus was on job satisfaction but there was little evidence that when this improved, so did productivity; this view is shared by Schneider and Blankenship (2017) and Lawler III (2017). Macey and Schneider (2008a) imply that employee engagement is a construct that has evolved from prior research on work attitudes, this view is supported by Saks (2006).

The focus of the same research then moved to job satisfaction but measured against the work itself and their leadership. Results showed loyalty/commitment but no real relation to performance (Schneider and Blankenship, 2018). This emphasizes that job satisfaction was not a key factor in performance. What was found was that work conditions proved to be better motivators, with positive results for the organisation. According Schneider and Blankenship (2018), to achieve the best outcomes at company level, an organisation needs to focus on engagement in the work, then engagement in the company. No one wants disengaged workers. They are an

irrecoverable cost to the business. This idea is supported by several researchers and consultants who claim engaged employees are good for business.

Levenson and Fink (2017) establish that the concept of employee engagement works at a conceptual level – where more effort employed should yield greater performance results, however in their opinion, the challenge is getting the employee to apply a greater effort. Like Lawler (2018), Levenson and Fink (2017) recognize there are many practical problems with how engagement and performance are evaluated and managed. In their opinion to improve productivity, the change in employee engagement requires increasing the behavioural engagement factor because productivity is about doing less to achieve the same goals rather than doing more. Welbourne (2018) in support of Lawler (2018) states that employee engagement as understood by several researchers, is declining. In her opinion, we may be in an era where we need to make changes to the methods.

2.5. Employee engagement and business unit performance.

Ramanujam (2010 p.34) defines productivity as “the amount of physical output for each unit of productive input. Measurement of productivity and its contribution to organization effectiveness reaps two rewards. Firstly, senior management can use the results to guide and direct employees towards the strategic goals. Secondly, the ability to better manage employees should foster feelings of loyalty, creativity and productivity (Ramanujam, 2010). It is a common belief that there is a correlation between an employee’s work productivity and his/her opinion (Kahn, 1990, Kahn, 1992, Buckingham and Coffman, 1999). The question posed by Gallup on engagement included 10 (out of 12) that had consistent links with productivity. The study found that work places where more employees were indeed more productive in their workplaces, they answered positively to the 12 questions.

To confirm the link, financial performance of a specific chain of stores was compared. Stores recording in the top quarter on the employee opinion appraisal, were on average just under 5% over their sales budget for that year, while those in the lower quarter were roughly 1% below their budget (Buckingham and Coffman, 1999). The top quarter of stores ended their financial year 14% in excess of their profit budget, while those in the lowest group missed their profit targets by 30%. Positive responses were also associated with lower employee turnover levels. Ramanujam (2010 p.35)

agrees stating that an organization's ability to manage employee engagement is closely associated to its ability to achieve superior performance and exceptional business results.

Ramanujam (2010) notes a difficulty, but not an impossibility in measuring the productivity of knowledge workers and their contribution to organizational effectiveness. In Figure 2-3, Albrecht, Bakker, Gruman, Macey and Saks (2015) show a high level model that assists in explaining how a strategic emphasis on employee engagement can result in competitive advantage. The arrows are indicative of relationships among the aspects in the model: direct, indirect and reciprocal. Each connection implies a level of influence the elements have and the reverse arrow shows that downstream outcomes also predict “upstream” engagement related constructs (Albrecht et al., 2015).

Albrecht et al. (2015) argue that in order for engagement to deliver on its stated benefits, it must be embedded in a well-integrated HRM system, supported by good policy, practice and procedure. Albrecht et al. (2015) identified four important engagement focused human resource practices to support engagement and consequently boost downstream performance of the organisation. These practices are:

- Socialization
- Learning and development
- Performance management
- Employee selection

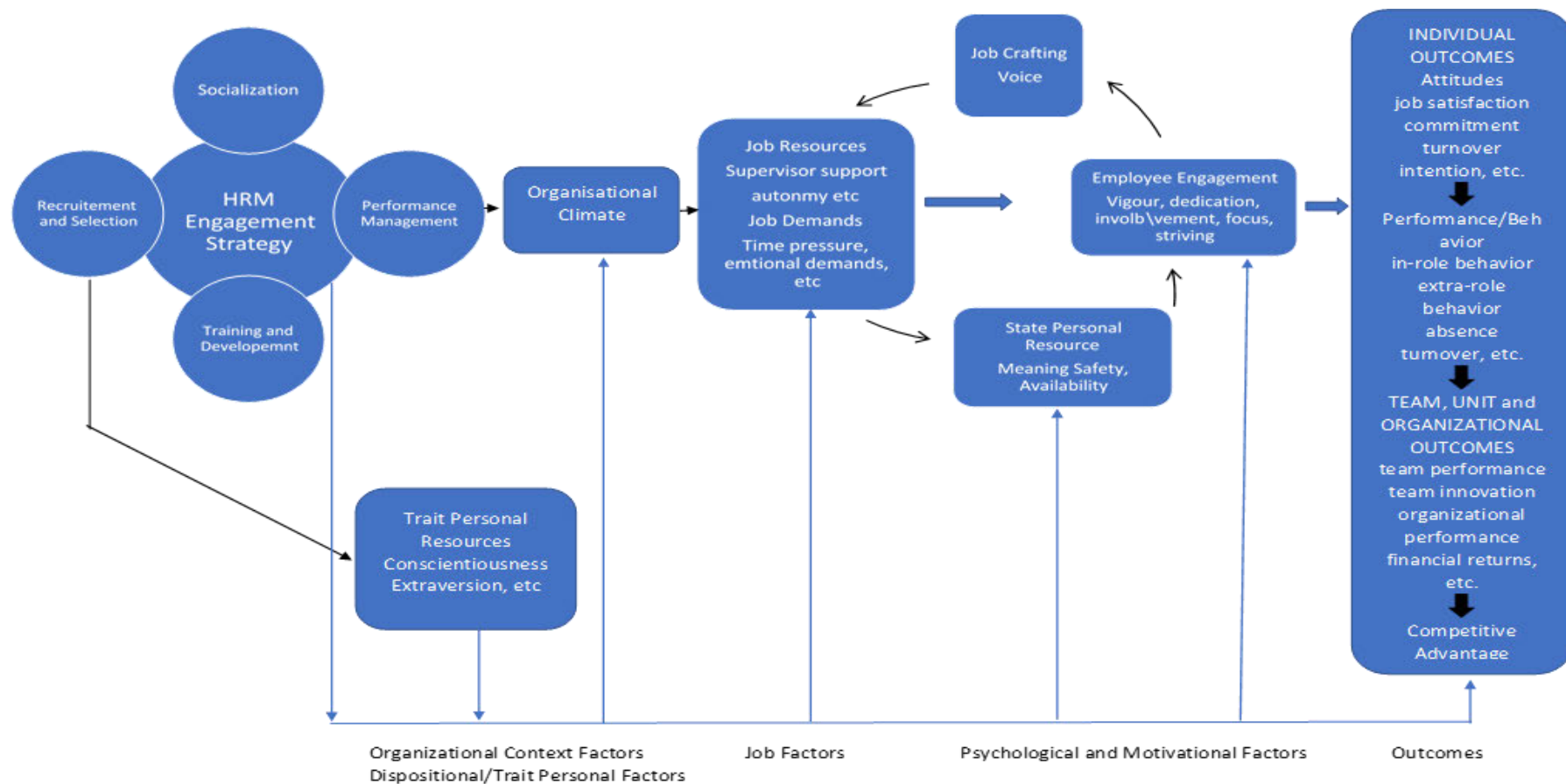


Figure 2-4 Strategic engagement model

Adapted from Albrecht, S. L., Bakker, A. B., Gruman, J. A., Macey, W. H. & Saks, A. M. 2015. Employee engagement, human resource management practices and competitive advantage: An integrated approach. *Journal of Organizational Effectiveness: People and Performance*, 2, 7-35.p9.

In support for the model, Albrecht et al. (2015) purports that HR management systems have an impact on organisational climate which in turn influence job resources and job demands that influence the psychological experiences of availability, safety and meaningfulness of employees and as a result influence engagement. Their proposition is two-fold: firstly, research evidence suggests employee engagement can be a source of competitive advantage, secondly, engagement is associated with individual, team and organisational performance and competitive advantage (Albrecht et al., 2015).

A study was conducted by Anitha (2014) to establish the impact of employee engagement on employee performance. Figure 2-4 represents the model of the determinants of employee engagement. Co-worker and team relationship as well as the work environment were found to impact majorly on employee engagement and consequently employee performance.



Figure 2-5 Determinants of employee engagement

Adapted from Anitha, J. (2014). Determinants of employee engagement and their impact on employee performance. *International Journal of Productivity and Performance Management*, 63, 308-323.

According to Ramanujam (2010) three basic aspects make up employee engagement:

1. Employees and their individuality
2. Employers and the work environment they create for engagement
3. Interaction between employees at various levels

Engaged employees exhibit the following characteristics, passion for their work, pride in their organization, enthusiasm towards work every day (Ramanujam, 2010).

Disengaged employees have an opposing effect that impacts not just their individual productivity but also that of their coworkers. Gallup found that 18% of employees who were not engaged with their work could undermine the success, productivity and morale levels of their coworkers (Moreland, 2013). Disengaged employees take more sick days and companies with low levels of engagement experience 32.7% decrease in operating income (Moreland, 2013, Buckingham and Coffman, 1999). To deal with disengagement, Moreland (2013) proposes that employers understand the unique strengths of employees with respect to job fit in order to effectively manage their work efforts and improve both engagement and productivity levels.

Jones (2011) notes that tensions exist within the field of engagement research owing to the concentration on the individual rather than the organisation ; and the primarily positivist contributions. Ramanujam (2010) and Moreland (2013) argue that the onus to create an environment and culture beneficial to engagement and partnership lies with the organisation. Moreland (2013) further states that getting maximum productivity from employees is a main concern of any employer.

2.6. Job Design in the work place

One mechanism identified by Kahn (1992) that promotes psychological presence at work is through jobs. When job fit is poor – positions fail to match inherent interests and skills or lack of training to upskill individuals- employees leave. This occurs as a result of the misalignment with the employees ability and the requirements of the job and as such employees find it difficult to engage with their jobs (Anitha, 2014). In other words, the organisation of the elements that make up a job can act to decrease or increase an employee's effort (Wärnich et al., 2018). Bakker and Demerouti (2007) agree with Kahn (1992) stating that poorly designed jobs exhaust the mental and physical resources of employees which negatively affect employee well-being, thus employees withdraw themselves from active involvement in their work.

Wärnich et al. (2018) define job design as “*. the influence of the functions, relationships and content of jobs in a way that booth achieves organisational goals and meets the personal needs of individual job holders.*” (p.151)

Morgeson and Humphrey (2006) developed what is considered the most comprehensive measure of job design – the Work Design Questionnaire (Truxillo et al., 2012, Grant and Parker, 2009, Grant, 2008, Zheng et al., 2011, Morgeson et al., 2012). The Work Design Questionnaire (WDQ) integrates motivational, work and social contexts and characteristics and the job itself to create a link between the job and the work environment (Morgeson et al., 2012, Truxillo et al., 2012). These characteristics affect a variety of employee behaviours and attitudes mediated by psychological states. These characteristics are:

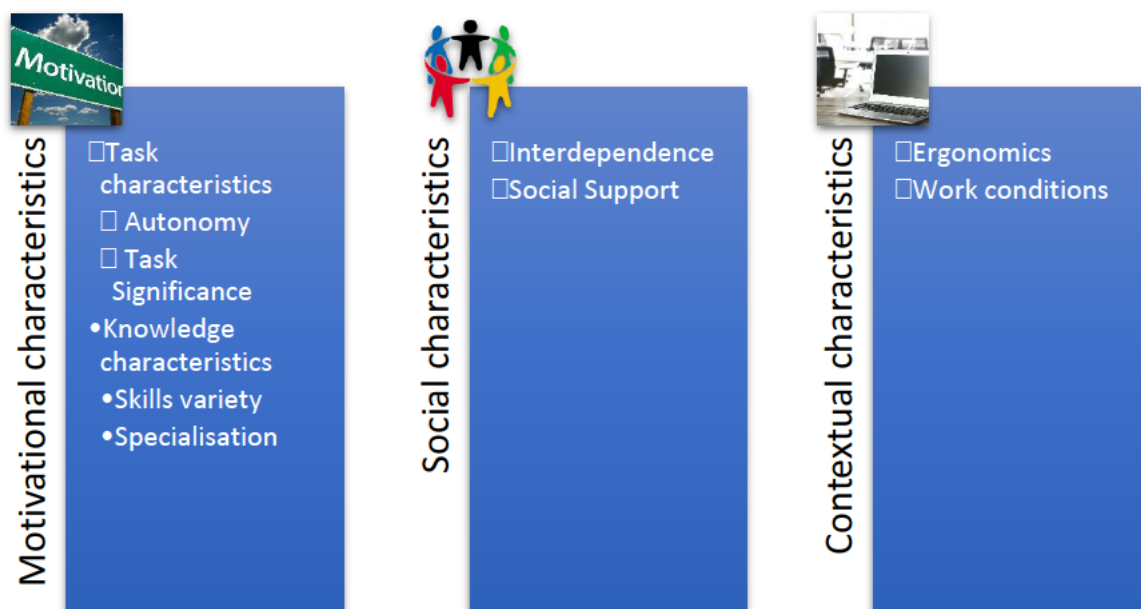


Figure 2-6 Characteristics of Job design. Source: Author.

This study focused on the motivational characteristics of the WDQ's: Task and Knowledge characteristics. The task characteristics focus on the range and nature of a job's tasks and how the work is accomplished (Truxillo et al., 2012, Morgeson and Humphrey, 2006), while knowledge characteristics focus on the skills, knowledge and abilities employees require to function in their jobs (Morgeson et al., 2012).

A job can be designed to allow an individual to explore and expand on skills and self or it can limit the extent to which an individual contributes themselves to their work. However, suitability for a particular position is an important consideration in job design.

Research shows that particular objective properties of jobs produce conditions for performance, satisfaction, and great work motivation (Garg and Rastogi, 2006, Lawler III, 1969). Well-designed jobs involve a diversity of skills, offer task significance and identity and have elements of independence, enable employees to experience meaningfulness, provide direct feedback and encourage responsibility for and knowledge of the results of their work.

Great importance lies in the designing of jobs in which stress is reduced, motivation is enhanced and satisfaction of employees is such that the organization can compete effectively in the market place (Moreland, 2013, Garg and Rastogi, 2006). Job design has its founding in scientific management and the first major theory was that of Herzberg – two-factor theory (Garg and Rastogi, 2006). Herzberg identifies two types of motivators, intrinsic and hygiene. Intrinsic motivators are associated with the work itself – recognition, achievement, and responsibility. Hygiene factors are associated with externalities –supervision, work conditions, and compensation. Hygiene factors are necessary to the human resource management, however only challenging work creates the motivation in employees through - opportunity for achievement, recognition, advancement and growth (Garg and Rastogi, 2006).

Garg and Rastogi (2006) recognize the development on works on two-factor theory by Hackman and Oldham in 1976. The job characteristics model (JCM) identifies five core characteristics;

- Skill variety -This denotes the degree to which the job necessitates the employee to draw from a number of diverse skills and abilities as well as upon a range of knowledge.
- Task Identity - This denotes whether the job has a discernable beginning and end or how comprehensive a module of work the employee performs.
- Task Significance - This involves the importance of the task. It includes both internal significance (i.e. how essential the task is to the organization) and external significance (i.e. how proud workers are to tell their relatives, friends, and neighbors what they do and where they work)

- Autonomy - This refers to job liberty. How much freedom and control workers have to perform their job, for example, plan their work, make decisions or govern the means to accomplish the objectives.
- Feedback - This speaks of the objective information about progress and performance that can originate from the job itself, from overseers or from any other information system.

According to Wörnich et al. (2018) task significance, task variety and skill variety combined, create meaningful work. An employee in a job that has a high level of these attributes will find their job important, worthwhile and valuable. A feeling of personal responsibility is result of high autonomy and lastly a job that provides feedback will give the employee guidance on how effectively they are performing (Wörnich et al., 2018).

Three psychological states were also identified as responsible for internal work motivation, improved work satisfaction, lower absence and employee turnover, and improved performance, namely

- Experienced Meaningfulness- This perceptive state involves the extent to which employees perceive their work as making an appreciated contribution, as being important and worthwhile.
- Knowledge of Results - The degree to which the employee identifies and apprehends, on a continuous basis, how effectively they execute their job.
- Experienced Responsibility - The extent to which the employee feels personally accountable for the results of the work they do.

The motivating potential score (MPS) is a predictive index used to score the presence of the above central dimensions (knowledge of results, experienced responsibility and experienced meaningfulness) in a particular job. A job that has a high MPS will have a high score in a minimum of one of the factors that have a high autonomy and feedback score and lead to experienced meaningfulness (Robbins, 2009).

In the JCM if a job scores high on the MPS index, the probability of nonattendance and employee turnover will be reduced and motivation, performance and satisfaction will likely be positively affected. Autonomy and feedback are the two most important work characteristics, employees with greater desire to be challenged and grow personally responded more favorably to enriched work than others (Garg and Rastogi,

2006). Overall Jobs that have the intrinsic elements of the JCM, are found to be more satisfying and result in higher performance in employees when compared to jobs that don't have these characteristics (Robbins, 2009).

2.6.1. Redesigning of jobs

Attridge (2009) conducted a review of academic and business literature on the issue of employee engagement and suggested work place behavioural health practices that can be adopted to improve engagement. Attridge (2009) identified job design as a course of action employers can take to respond to disengagement or improve engagement. According to Attridge (2009) specific elements of work and tasks can be redesigned to make use of an employee's strengths along with placing them in jobs that better match their talents – job fit (Moreland, 2013).

In an effort to reduce the cost of absenteeism and employee turnover, a balance needs to be found between an employee's individual needs and the employer's economic goals (Wärnich et al., 2018). This balance can be found in a motivation intensive job. This category of jobs includes the following approaches discussed briefly below;

- Job rotation – Moving/shifting an employee from job to job. This allows for alternation of tasks.
- Job enlargement – a change is made in the scope of job to create variety for an employee.
- Job enrichment – the addition of more meaningful duties and tasks to improve satisfaction and sense of reward.

2.6.2. Job design and engagement

A connection exists between good job design and high levels of engagement (Gallagher and Einhorn, 1976, Zareen et al., 2013), when an employee knows what to do they are more likely to be productive. Not knowing what to do or what is expected leads to confusion and frustration.

Lawler III (1969) sought to answer the question of why job design improves employee productivity. According to Lawler III (1969) expectancy theory best describes the effect of job design. In this theory, motivation to perform effectively is determined by the effort-reward probability and reward value. If either are low, motivation will not be present. Lawler's main argument is that job design can positively affect motivation because the individual's belief about certain rewards will result from putting in high

levels of effort. Three requirements exist within a job in order for job design to motivate; meaningful feedback about performance, perception by the individual that the job requires the use of abilities of value to them in order to perform effectively, and high degree of autonomy over goal setting (Lawler III, 1969).

Shantz, A., Alfes, K., Truss, C. & Soane, E. (2013) conducted a study on employee engagement as an intermediary for the relationship between job-design and performance in the UK construction industry. Their findings showed that employees who held jobs that had high levels of task variety, autonomy, task significance, and feedback showed higher engagement levels. Results also showed that this resulted in positive performance outcomes

According to De Spiegelaere, S., Van Gyes, G., De Witte, H. & Van Hootegem, G. (2015), Karasek Jr (1979) Demand/Control Model suggests that where jobs are high in autonomy and time pressure, those employees will be more innovative and more engaged. Furthermore, when it comes to work engagement, high autonomy can buffer the negative effects of time pressure. But high time pressure and high autonomy do not result in superior levels of work engagement (De Spiegelaere et al., 2015).

2.7. Activities for managers in the construction sector

Buckingham and Coffman (1999) believe the manager is more important than employee-focused initiatives. The manager controls the work environment and the experience of the employees within that environment. How employees experience their managers has a greater impact on their engagement than whether the company has a profit sharing scheme (Buckingham and Coffman, 1999). Ramanujam (2010) concurs, identifying the subordinate-supervisor relationship as being linked to employee development. Strong association exists between an employee's commitment to a particular initiative and management's commitment to supporting that initiative (Ramanujam, 2010).

2.7.1. Construction managers and the work environment

Construction managers spend a minimum of 9 hours of the day in the workplace. This is more time than is likely spent with family or doing leisure activities. Construction managers therefore spend more time with their co-workers, at work and as such the co-workers and the work environment have an opportunity to effect behaviour. There are two parts to the work environment; first the employee's job role and second the

wider organisation in which that role is rooted. These two aspects can either induce engagement or detract from it (Fleck and Inceoglu, 2010). This makes the work environment a key role player in establishing an employee's state of engagement.

Figure 2-6 below depicts the typical hierarchy of responsibilities on a construction project. The construction manager is responsible for the execution of the construction project with the assistance from the various team members who report to the construction manager.

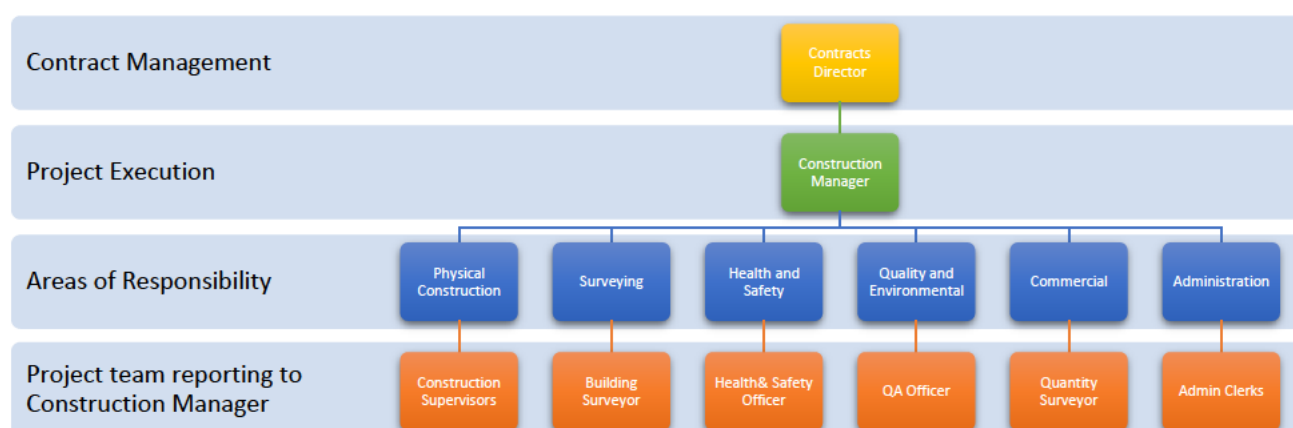


Figure 2-7: Typical Construction Project Hierarchy within the main construction contracting firm. Source: Author.

As mentioned previously, perceptions individuals have of their environment affects their work and levels of job satisfaction. This perception is also influenced by employees interpersonal, group and intergroup interactions within the organisation. According to Fleck and Inceoglu (2010), when employees fit in better in the workplace, they are more inclined to be engaged and thus engagement and performance can be increased by understanding the environmental features in a specific context.

Engaged employees show up, they stay longer and are more productive overall. Disengagement shows signs of high absenteeism and staff turnover which can negatively impact on profits. Creating an organisational climate that is conducive to engagement is therefore a priority for any business seeking to improve productivity. According to Powl and Skitmore (2005) work environments that foster innovation and creativity are generally associated with productivity. Anitha (2014) suggests that

employee performance is heavily dependent on the design features of the organisation and the organisational policies, practices and procedures. This further emphasises the need for an integrated approach to strategic human resource management to increase engagement levels.

2.7.2. Work activities for construction managers

The construction manager can be considered the most critical factor affecting the success of project outcomes in a construction project. The effectiveness of their daily activities ensures positive impacts on the overall project (Powl and Skitmore, 2005). A construction manager as described by the South African Council for Project and Construction Managers is the individual responsible for the “management of the physical construction process and includes the, administration, co-ordination and management of resources within the built environment” (SACPCMP, 2006 p3).

Construction managers perform a variety of services for the duration of a project as representatives of the main construction contractor. They are generally involved in only the last 4 stages of a project (there are 6 stages in total) –development of design, tender procurement and documentation, construction management and documentation and project close out.

Each stage is defined below

Design development- involves the management, co-ordination and integration of the detail design development process within the project time, scope, quality and cost constraints (SACPCMP, 2006p7).

Tender documentation and procurement – includes the establishment and implementation of procurement strategies and procedures, as well as the formulation of necessary documentation, for timeous and effective execution of the project (SACPCMP, 2006 p8).

Construction documentation and management – “this includes managing and administering the construction processes and contracts, together with preparing and coordinating of the required documents to enable effective execution of the construction works (SACPCMP, 2006 p9).

Project close out – the management and administration of the project closeout, incorporating preparing and coordinating of the required documents to enable the effective operation of the project (SACPCMP, 2006 p11).

The minimum competencies required of a construction manager are spilt into two categories: technical and project management. A combination of the two is required for the effective execution of their work and successful delivery of projects. Table 2-1 Indicates the Technical competencies, table 2-2 shows the project management competencies.

Table 0-1 Technical competencies required of a Construction Manager

TECHNICAL COMPETENCIES			
<i>Building science</i>	<i>Building processes</i>	<i>Design processes</i>	<i>Financial and cost aspects</i>
Understanding Structures	Site, Plant and Equipment	Sequence of Design Processes	Financial Processes
Understanding Construction and Building Sciences	Formwork Systems	Design programme	Cost of Building
Understanding Construction and Building Finishes	Quality Management		
Knowledge of Building Materials	Environmental		
	Health and Safety		
	Organisational Structures		
	Building Sequences		
	Production Factors		
	Knowledge of Building Trades		

Adapted from SACPCMP 2006. Identification of work and scope of services for construction managers registered in terms of the Project and Construction Management Professions Act no. 48 of 2000. Construction Manager. South Africa: The South African Council for the Project and Construction Management Professions (p12).

Table 0-2 Project Management competencies required of Construction Managers

PROJECT MANAGEMENT COMPETENCES
1. Basic Principles of Law of Contracts
2. Construction Contracts.
3. Stakeholder management

4. Time Management
5. Quality Management
6. Cost Management
7. Subcontractor Management
8. Health and Safety Management
9. Contractual claims management
10. Project close out management

Adapted from SACPCMP 2006. Identification of work and scope of services for construction managers registered in terms of the project and construction management professions act no. 48 of 2000. Construction Manager. South Africa: The South African Council for the Project and Construction Management Professions (p.12).

Limited literature exists on factors influencing the success of projects in the South African context that emphasize the role of the construction manager. A study carried out in the construction industry in Pakistan endeavoured to recognise which variables affect the success of project implementation (Saqib et al., 2008). The success criteria were spilt into those for the owners, designer and the contractor. For the purpose of this study, only the criteria to measure success by a contractor are presented.

Saqib, Farooqui, & Lodi (2008) identified the following criteria typical to contractors:

- Under budget
- Profit
- Meet schedule
- No Claim
- Good direct communication

- Quality specification met or exceeded
- Minimal or no surprises during the project

Factors that influence project success that fall within the work activities of a construction manager are those categorised as project management factors and these are listed by Saqib et al. (2008) as being “monitoring, control mechanisms, project organisation structure, troubleshooting, adequate communication, coordination effectiveness, decision making effectiveness, plan and schedule followed, feedback capabilities and related previous management experience” p.395. All the variables are affected by the overall construction management actions.

2.8. Employee improvement in the work place

It has been established that employee engagement is a broad subject but essentially it describes an employee’s involvement, enthusiasm and satisfaction with the work they are undertaking. According to Robbins (2009), a passion for work and a deep connection with the organisation are characteristic of highly engaged employees. On the other hand, disengaged employees are detached from their work, no longer putting in time and effort into their tasks. Employee engagement therefore captures the intersection of various variables in the work place (Robbins, 2009). The variables covered in this study are:

Employee satisfaction – This is the positive sentiment employees have towards their job based on an evaluation of certain characteristics (Robbins, 2009). An employees work incorporates the physical task activities as well as interaction with colleagues and supervisors, working with organisational rules and policies, meeting performance standards, and coping in sometimes than ideal working conditions (Robbins, 2009).

At an organisational level, studies by Ryan et al. (1996), (Ostroff, 1992, Harter et al., 2002) indicate that a positive relationship exists between satisfaction and performance. According to these studies, organisations that have more employees with high levels of employee satisfaction, exhibit more organisational effectiveness when compared to those companies that have fewer satisfied employees.

Employee identification - Employee identification refers to how employees identify with the organisation on an emotional level. It is an individual’s perception of oneness with the organisation (Liu et al., 2011). Liu et al. (2011) states that under the umbrella

of social identity theory, “ the better an individual identifies with an organization, more likely he or she takes on the organization’s standpoint as self-defining and acts in the organization’s best interest (p. 3188)”.

This infers that where identification levels are high in an organisation, there members are likely to perform the tasks required of them. This means that employee identification produces motivation that improves the organisations performance(Liu et al., 2011).

Employee commitment – This is a condition in which the employees identify with an organisation and its goals, and wish to remain members of that organisation. According to Robbins (2009) and backed by a study conducted by Riketta (2002), the relationship exists between job productivity and employee commitment is positive but limited. Robbins (2009) delineates the strength of the relationship between commitment and productivity on time spent within the organisation: new employees showed a stronger relationship when compared to those of experienced employees.

Research also identifies a negative relationship between commitment and both turnover and absenteeism (Angle and Perry, 1983, Pierce and Dunham, 1987). The current work environment and the speed at which employees change jobs can make the concept of commitment seem less important as the workforce becomes gradually more fluid.

Employee loyalty is described as the combination of well wishes, sacrifices, identification and reciprocity an employee has towards an organisation (Kumar and Pansari, 2014, Schrag, 2001). According to Schrag (2001), loyalty implies a relational connection to an object, person or organisation. In the same light, Scharg (2001) also highlights that loyalty can provide an employee with meaning to their work.

Loyal employees may find themselves in positions in which they are given opportunities for growth and freedom to take initiative which will in turn encourage greater levels of loyalty. These employees may then be more willing to put the firm’s interest ahead of their private interests and work longer hours. According to Schrag (2001) “wether we invest ourselves in work because it is meaningful or it is meaningful because we invest ourselves in it, the self-investment elicits loyalty” (p.53). This notion supports that employee loyalty is good for any organisation. It should be noted that the construction industry is experiencing excessive job mobility or “job hopping”. A

phenomenon skilled managers are succumbing to meet the high demand and low supply of skills (Robbins, 2009).

Employee performance – involves the evaluation of an employee's output in terms of quantity, quality, timelines, cooperativeness and attendance at work. The focus is on creating an environment in which employees can perform at their best.(Wärnich et al., 2018).

When employee performance is well managed and HR systems are properly rolled, the combination of increased employee satisfaction and employee productivity will translate into high customer satisfaction and profitability and value for the organisation (Kumar and Pansari, 2014).

2.8.1. Aspects to Employee Engagement that impact Job design

Training of employees goes hand in hand with job design, for the advancement of knowledge and as a means to motivate employees to perform better. Ergonomics is a second aspect of job design that influences the motivational levels of employees. Creating a safe working environments that support efficient work and productivity is necessary to sustain a workforce (Garg and Rastogi, 2006). Garg and Rastogi (2006) identify knowledge management as a discipline that improves the performance of employee in respect to job design.

2.8.2. Developing Engaged Employees

With specific reference to the field of finance, McMurray (2015) suggests 4 ways of developing engaged employees

- Co-create customized goals – giving employees an opportunity to help set their own work goals that align with corporate objectives
- Foster open two-way communication – Have frequent engaging discussions with employees and encourage team building
- Make work fun – allow opportunities for social gatherings specially to pick up the mood when team spirits are low
- Show appreciation – tell employees when they are doing well

According to McMurray (2015) utilizing these suggestions will result in increased levels of engagement, motivation and effort above what is necessary. Ramanujam (2010) proposes the following interventions to improve employee engagement:

- Culture
- Continuous reinforcement of people focused policies
- Organisational performance

Ramanujam (2010) suggests that creativity should be stimulated in employees, and when tasks seem mundane employers should look to introduce variety through job rotation. Ramanujam (2010) also advocates for good consistent communication, defining clear expectations and giving constructive feedback. Caring for employee wellbeing and work-life balance; as well as celebrating success and being consistent in engagement initiatives should ultimately increase employee engagement levels.

Advantages of engaged employees according to Ramanujam (2010)

- Loyalty towards the company and reduced levels of staff turnover
- Passion commitment and alignment with strategic goals
- Trust in the work place
- Energetic work environment
- Business growth
- Brand ambassadors

Albrecht et al. (2015) contend that in order for the gains of engagement to be realized, engagement needs to be rooted within an integrated system of human resource management policies, procedures and practices.

2.9. Conclusion

From this literature review it is clear that employees are an essential part of any organisation and can therefore be considered the most valuable asset. In the case of construction contractors seeking successful project delivery, emphasis must be placed on the construction manager as an important asset. Employee engagement and job design are tools that can be used to understand the current work environment as experienced by employees. If sustainable competitive advantage is to be achieved

using this asset, a good blend of human resource practices and job design is necessary.

With all the various definitions of engagement available there are essentially two aspects common in all definitions: (1) an energised and positive work-related motivational state and (2) an eagerness to participate in work role and organisational success. Levels of employee engagement can be improved using various HR practices and mechanisms to increase the productivity of employees to the benefit of the organisation. The next chapter details the research methodology used in conducting the research.

Chapter 3 Research Methodology

3.1. Introduction

This chapter details the framework used for this research. It sets out the aims and objectives of the study to ensure that the chosen design collects the appropriate information to solve the problem. It includes a brief overview of research designs followed by a description of the philosophical worldview underpinning the chosen research method.

The chapter describes the chosen method and procedures used for the collection and analysis of data. It outlines the strengths and weaknesses of the data and justifies the intended means to analyse the data. It includes the design technique, the sampling methodology as well as the limitation and consequences thereof. Lastly it discusses issues pertaining to ethical procedures and how they were addressed in this study.

3.2. Research Design

Research design involves developing the action plan for conducting the research. It considers the objectives of the study, determines the sources of information, selects an appropriate design technique, sampling methodology, considers the schedule and the cost of the research (Zikmund et al., 2013, Saunders et al., 2016, Creswell and Creswell, 2018). The nature of a study will either be evaluative, exploratory, explanatory, descriptive or a combination of these. Table 3-1 describes the purpose of each design.

Table 0-1 The purpose of the different types of research

Type of study	Purpose
Evaluative	Research to find out how well something works. The process of assessing materials or methods with respect to consistency and internal accuracy or by comparison with external benchmarks .
Exploratory	Inquiries that aim to seek new insights into phenomena, assess the phenomena in a new light and to ask questions.
Explanatory	Research that centres on studying a situation or a problem to clarify the relationship between variables.

Descriptive	Research for which the purpose is to create an accurate interpretation of situations, events, or persons.
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Adapted from Saunders, M. N. K., Lewis, P. & Thornhill, A. 2016. Research methods for business students, Harlow, Essex, England, Pearson Education Limited. p174-p176.

This design chosen for this study was the descriptive research design. Saunders et al. (2016) describes this type of research design as “to gain an accurate profile of events, persons, or situations.” p175. A study of this nature is appropriate as the research questions seek to clarify the precise level of employee engagement and job design that are unknown. This study is a medium to an end rather than an end in itself.

3.3. Research philosophy

Research questions must be viewed through a philosophical lens. This lens results in certain assumptions as to how the study is approached. These assumptions inform the methodological choice (Saunders et al., 2016). Two main research philosophies exist, phenomenology and positivist. Phenomenology is an philosophical approach to the study of human experiences founded on the notion that humankind is in itself inherently subjective and determined by the context in which those people live (Zikmund et al., 2013). The participants’ recollections and interpretations of their experiences are the main focus of this philosophy.

Positivism is a research philosophy that relates to natural science and includes working with an apparent social reality to produce law-like generalisations (Saunders et al., 2016). The knowledge that is formed is suggested as being unambiguous and accurate. The development of this research methodology is underpinned by a post positivist worldview. This view recognises that in a study of human behaviour and actions, the researcher cannot be definitive about their claims of knowledge unlike with traditional positivism. The study of employee engagement as a means to improve productivity follows a deterministic philosophy, within the post positivist worldview, as problems studied seek to identify and evaluate causes that influence outcomes (Creswell and Creswell, 2018).

According to Saunders et al. (2016), Creswell and Creswell (2018), knowledge developed through the post positivist lens is done through the observation of social reality to attempt to produce law-like generalisations. Assumptions under this view are

better associated with quantitative research than with qualitative research (Creswell and Creswell, 2018). This view further supports the chosen (quantitative) approach to research as it promises unambiguous and accurate knowledge and data is collected with little interference with its substance, unlike with a qualitative approach that necessitates framing and reframing questions and interpreting the answers.

3.4. Research methods

There are three research methods a researcher can select to conduct their study; quantitative, qualitative and mixed methods (Creswell and Creswell, 2018, Saunders et al., 2016, Zikmund et al., 2013)

3.4.1. Quantitative

This method is distinguished by its generation and use of numerical data. It makes use of techniques such as structured questionnaires and analysis is done through graphs and statistics.

3.4.2. Qualitative

This method is distinguished by its generation and use of non-numerical data. Associated techniques for data collection are interviews and data are analysed through categorisation.

3.4.3. Mixed methods

This method is a combination of quantitative and qualitative. It is a method gaining popularity in business and management research (Saunders et al., 2016).

No design is superior from the other, but the choice of design is dependent on the experience of the researcher, the nature of the research problem (Saunders et al., 2016, Zikmund et al., 2013, Creswell and Creswell, 2018) and in the case of this study, the audience (Creswell and Creswell, 2018).

3.5. Chosen research method - Quantitative

This approach to research has been the dominant method in social research (Creswell and Creswell, 2018). It is a design that is principally associated with survey research strategies and experiments. Using this method allows the researcher to remain neutral and detached from respondents and as such reduces the sphere of influence when compared to qualitative approaches. This research design incorporates controls that

ensure validity of data. Quantitative research design is well suited for assessing the relationship between the variables and allows the testing of objective theory (Saunders et al., 2016), two aspects that are relevant to this study. Variables are measured numerically, and analysis is by means of graphical and statistical techniques. Collection of data is done in a standard manner and by using clear questions, this ensures each participant will understand the questions in the same way.

3.5.1. Research strategy

There are four basic research strategies: observation, secondary data study, experiment and survey. Experiments are conducted in the field or in a lab, surveys are either interviews or questionnaires (Zikmund et al., 2013). Below is a brief discussion of each technique:

- Observation is methodical process of witnessing and recording occurrences, objects or behavior patterns of people. This technique does not require communication or questioning of subjects under observation.
- Secondary data studies involve making use of data previously collected for some other purpose. This existing data is used to examine the research questions. It requires no access to respondents or subjects.
- Experiments assess the cause and effect relationships. Research using this technique requires the researcher to have a controlled research situation in which causal relationships between variables can be evaluated.
- Survey technique used to gather primary data. This data is obtained directly from the subject of the study. Respondents are asked questions (either written or spoken) and that data is recorded at that given time.

A research strategy defines how the research questions will be answered. No strategy is inferior or superior to another, however, some strategies are principally linked to a certain type of research design. A quantitative research design achieves a reasonable level of coherence when employing either an experiment or a survey strategy. This does not mean that a qualitative approach cannot employ a survey. Strategies are not mutually exclusive (Saunders et al., 2016), though surveys and experiments are primarily linked to quantitative research design.

Glasow (2005) citing Kraemer (1991) states that survey research has three distinguishing characteristics; it makes use of quantities to describe aspects of a

particular population; data collected is subjective in nature due to it being collected from people and the sample of the population can then be generalized.

3.5.2. Survey method

The chosen strategy for this research was the survey method. The survey technique is a common strategy used in business and management for exploratory and descriptive research (Saunders et al., 2016). Its purpose is to collect primary data (Glasow, 2005). The survey strategy includes questionnaires, structured observation, and structured interviews. The survey was in the form of structured questionnaires. According to Saunders et al. (2016) an advantage of questionnaires is that they allow for the collection of standardized data from a sizeable populations in a highly economical way, with easy comparison (Zikmund et al., 2013). Glasow (2005) states that a survey allows the researcher to gather demographic data that describes the composition of the sample. There is also a perceived level of authority that people associate with surveys which supports its selection as technique of choice. Questionnaires allow for the attitudes, trends and opinions of participants to be expressed numerically and are easy to explain and understand. According to Glasow (2005) this information is otherwise difficult to obtain using observational techniques.

3.5.3. Advantages and disadvantages of survey method

The survey served to measure the levels of employee engagement and perceptions of job design within a major construction contracting firm. This was the preferred method of data collection as it is ideal for asking closed-ended questions, it allows the researcher to describe and explain the features of a very large sample population, it is a quick means to gain some information and can work within limited research budget and time (Glasow, 2005). It should be noted that this measure was only an estimate of the true population and not the exact measurement.

The survey method is time consuming when it comes to preparation and analysis of data. A central disadvantage to this method is the reliance on others for information. Data collected is also limited in range when compared to other research strategies (Zikmund et al., 2013, Saunders et al., 2016). This is due to the number of questions contained in a questionnaire and relying on the goodwill of a participant to respond (Saunders et al., 2016). According to Zikmund et al. (2013), survey method requires researchers to follow certain research principles to prevent misuse.

Errors exist when making use of the survey method. The two main errors are random sampling error and systematic error (Zikmund et al., 2013). Random sampling error occurs as a result of a statistical fluctuation in the variation in the elements selected for the sample of the target population. Systematic error is a result of the imperfect characteristic of the research design or a fault in the execution of the research (Zikmund et al., 2013). Addressing of errors will be discussed in sampling section. A further weakness in the use of this method is in the biases that may occur. The root cause is the reliance on people to provide data. The biases can be a result of the nature and accuracy of the responses received or the lack of responses from participants. Misreporting may also hide true results and give a false reflection of behavior (Glasow, 2005).

A well-known limitation with this choice of survey, is respondents access to the technology. Their level of technological competence and the level of technology they are using in relation to the requirements for the survey. Access to some individuals will limit group administration as the organisation is represented across the country but has all employees connected via the email making an email-based survey option viable. This platform also encourages a level of anonymity and should compel respondents to give honest answers to sensitive responses. Email-based surveys are discussed further in the instrumentation section.

3.6. The population

This section details the units of analysis for the study also known as the population. According to Zikmund et al. (2013), "... a population is any complete group of entities that share some common set of characteristics." p.385. The population size was limited to the 11 construction managers in the major construction contractor in the KZN region. These individuals are responsible for the successful management of construction projects. This includes the planning, monitoring, controlling implementation/execution, and completion and handover of the final construction product. The construction managers oversee and lead fellow employees, subcontractors, suppliers and stakeholders that are in any way affected by the undertaking of the project with the purpose of delivering value for all involved.

3.7. The sample and census

3.7.1 Sampling

A sample is a subset of a population (Saunders et al., 2016). Sample size depends on the population size, homogeneity, sample media and its associated costs and the degree of accuracy required (Glasow, 2005). Sampling is a means to estimate unknown characteristics of a population. Two techniques are available for sampling; probability and non-probability. Probability sampling is associated with survey methods, where samples have an equal chance of being selected from the target population and statistical estimations of the target population can be inferred.

Non-probability samples are selected where the target population is unknown and statistical inferences about characteristics of the population cannot be made (Saunders et al., 2016). Where the true population is unknown, theoretical samples can be used. A theoretical sample involve purposefully selecting a group of organizations that exhibit the desired features required for the focus of the study (Glasow, 2005). From this group, selection of individual respondents is then done at random to achieve an approximation. Where target populations are fewer than 50, data should be collected from the full population (Saunders et al., 2016).

According to Glasow (2005), the size of the sample is dependent on the following five factors:

- Ability of the researcher to gain access to the study subjects
- Desired degree of precision
- Degree to which the population can be stratified
- Statistical power required
- Selection of the relevant units of analysis.

Table 3-2 below shows the various types of probability and non-probability sampling techniques:

Table 0-2 Types of probability and non-probability techniques

Probability	Non-probability
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<i>Simple random sampling</i> – assures each element in the population has an equal chance of being included in the sample	<i>Convenience sampling</i> - a sampling procedure of obtaining those people or units that are most conveniently available .
<i>Systematic sampling</i> – a procedure in which a starting point is selected by a random process and then every NTH number on the list is selected	<i>Judgment sampling</i> -a technique in which experienced individual selects the sample based on personal judgment and some appropriate characteristic of the sample member
<i>Stratified sampling</i> - simple random subsamples that are more or less equal on some characteristic, are drawn from within each stratum of the population.	<i>Quota sampling</i> - a procedure that ensures that various subgroups of a population will be represented on pertinent characteristics to the exact extent that the investigator desires.
<i>Cluster sampling</i> - an economically efficient sampling technique in which the primary sampling unit is not the individual element in the population but a large cluster of elements; these clusters are selected randomly	<i>Snowball sampling</i> - a procedure in which respondents are selected by probability methods and additional respondents are obtained from information provided by the initial respondents
<i>Multistage area sampling</i> - sampling that involves using a combination of two or more probability sampling techniques	

Adapted from: Zikmund, W. G., Babin, B. J., Carr, J. C. & Griffin, M. 2013. *Business research methods*, Australia, South-Western. p392 – p400.

3.7.2 Census

According to Saunders et al. (2016) there are occasions in which a researcher may gather and analyse data from the entire target population. This is termed a census. Where sampling collects data from a portion of a population, a census is a statistical investigation that collects data about all participants in the entire target population. A census can be more expensive and time consuming on large scale populations and

as such, is suitable when a population is small. This allows for more reliable and accurate data as well as removes any personal bias, which can arise in the selection of samples.

This study followed a census method for two reasons; firstly, the researcher had access to all participants in the population and could approach them directly and secondly data from all individuals in the target population was collected. All individuals at this management level were assumed to have access to internet facilities and emails. Attempts were made to collect data from the full sample. The Population size was known – 11 construction managers. For a confidence level of 95% and a margin of error of 5%, the full population was required for the study (Saunders et al., 2016).

3.8. Research Instruments

A large feature in undertaking research is determining how data will be collected analysed and interpreted based on a chosen research method (Creswell and Creswell, 2018). Collection of primary data can be done using various instruments. These instruments fall under the categories of observation, interviews and questionnaires.

3.8.1. Observation

Observation has four approaches and is gradually regaining popularity with developments in technology. These four approaches are participant observation, structured observation, internet-mediated observation and observation using videography (Saunders et al., 2016). Participant and structured observation are more traditional methods with the former used mainly in qualitative research and the latter in quantitative. The two technology-mediated approaches involve data collection from the online community (Saunders et al., 2016).

3.8.2. Interviews

Interviews are purposeful conversations in which questions are asked and answers are carefully listened for. Interviews are categorised as being structured, semi-structured and unstructured (Saunders et al., 2016, Creswell and Creswell, 2018). Structured interviews follow a predetermined set of questions in the form of a questionnaire and questions are asked exactly as they are written to eliminate bias and collect quantifiable data. Semi-structured interviews are also known as qualitative

interviews in which the researcher asks key questions related to specific themes. Questions may vary or be omitted. Unstructured interviews explore in depth an area of interest in an informal manner. This type of instrument carries no predetermined list of questions only a clear idea about the aspect being explored.

3.8.3. Questionnaires

A questionnaire collects data by using methods in which each respondent answers the same set of questions in a predetermined order (Saunders et al., 2016). The delivery, return or collection and contact with participants differs according to the questionnaire design. Questionnaires can be administered in-person, by phone or over the internet, and they incorporate standardised questions that are easily interpreted by respondents. Questionnaires also assist in describing variability in different phenomena (Saunders et al., 2016). Figure 3-1 gives an illustration of the types of questionnaires available to a researcher.

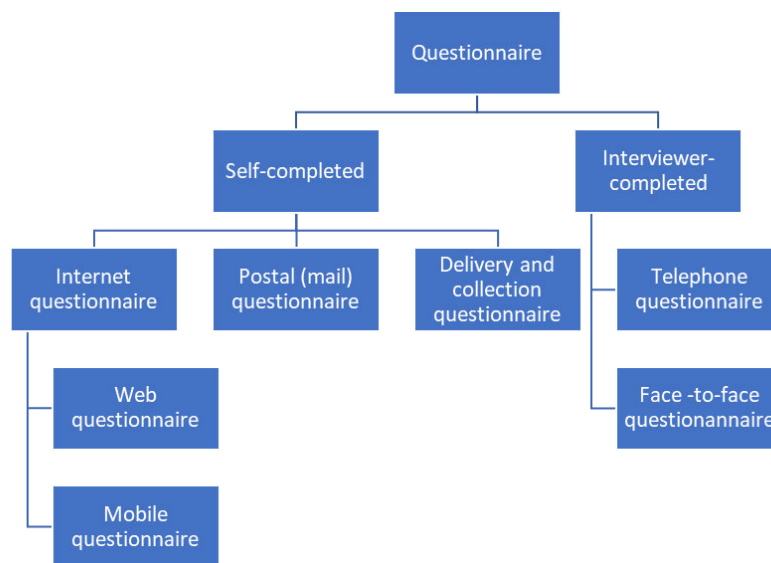


Figure 3-1 Types of questionnaire

Adapted from Saunders, M. N. K., Lewis, P. & Thornhill, A. 2016. *Research methods for business students*, Harlow, Essex, England, Pearson Education Limited.

3.8.3.1. Chosen Instrument - Questionnaire

Survey research was adopted for data collection in this study. This was in the form of structured questionnaires. Questionnaires allow for the attitudes, trends and on opinions of participants to be expressed numerically. Questionnaires are associated more with descriptive studies (like this one) that seek to understand attitude or opinion

towards organisational practices. Questionnaires are a popular instrument used in the survey strategy; this is due to them allowing research participants to respond to the same set of questions (Saunders et al., 2016). When large samples exist, questionnaires provide an efficient way to collect data. According to Saunders et al. (2016) the response rate, reliability and validity of a questionnaire are dependent on the design of the instrument.

3.8.3.2. Questionnaire development

The questionnaire format used is categorised as electronic because the use of a computer played a key role in the distribution of the survey and the collection of data. Electronic surveys fall under three main categories 1) point of contact, 2) email-based, and 3) web-based. According to Jamsen and Corley (2007) the typology of the instrument is an important consideration; methodological issues vary depending on whether an email, web-based or point-of-contact survey is employed.

Email-based surveys were employed. This required the researcher to manually code the data into a data base after receiving completed surveys. The survey was cross-sectional given research time constraints however the use of an electronic survey allowed for group administration as employees were accessible.

3.8.3.3. Questionnaire administration and distribution

Participants were contacted via email with a questionnaire attached. Jamsen and Corley (2007) raised certain issues regarding the presence of technology in the distribution of the survey instruments one such issue is security/access. This issue was addressed by the use of a direct email that ensured only those that were part of the selected sample would access the survey.

An email survey is advantageous as it allows secure confidential responses quickly and economically. It also eliminates the costs of paper, postage and data entry (Jamsen and Corley, 2007). These type of surveys allow for greater reach and larger samples than those associated with traditional mail, fax or even web-based surveys (Zikmund et al., 2013, Jamsen and Corley, 2007). There is the added appeal from the interactive nature of electronic surveys that could increase cooperation from respondents.

The use of this electronic document fell within the research budget and access to the questionnaire was simple for participants. Data was collected in two stages. The survey measured levels of employee engagement and job design within the major construction contractor. An adapted questionnaire developed by Gallup was used to measure existing levels of engagement (Kumar and Pansari, 2015). The work design questionnaire developed by Morgeson and Humphrey (2006) was used to measure job design and the nature of work.

3.9. Reliability and Validity

Reliability refers to the consistency of the measurement tool. It measures the degree to which the questions produce the same type of information each time they are used under the same conditions (Saunders et al., 2016, Creswell and Creswell, 2018). Jansen and Corley (2007) agree that the degree of measurement equivalence between computer-based and paper-and-pencil formats is strong, however low response rates have been recorded; for which techniques exist to improve those response rates. Reliability alone is not enough; the instrument needs to be both reliable and valid.

Validity refers to the accuracy of the measurement instrument; do the questions measure what is intended to be measured. Various types of validity exist, content validity, internal validity and external validity.

Content validity indicates items measuring the content they are intended to measure. Internal validity refers to the way the research outcomes match reality while external validity describes the degree to which findings of the study can be reproduced in other environments (Saunders et al., 2016).

Jansen and Corley (2007) note the following threats to validity associated with e-surveys:

- Selection – when an affect may be attributed to the differences between the kinds of people in each experimental group
- Instrumentation – when the result might be due to a variation in the measuring instrument between pre-test and post-test
- Electronic development – the ease at which the survey can be changed during data collection.

The reliability and validity of the data in this study were obtained through the use of existing and well-structured questionnaires. An adaptation of The Gallup Q12 Workplace Audit was used as the measure for employee engagement in this study. The survey has been used internationally and well as locally. A study by Havenga et al. (2013) found that the international survey was both valid and reliable and could be used effectively in the South African context. The questions asked and responses received were easily understood by respondents and the researcher respectively.

A section of the questionnaire is adapted from the Work Design Questionnaire (WDQ) created by Morgeson and Humphrey (2006). The WDQ is a wide-ranging questionnaire that evaluates 21 characteristics of work. This questionnaire has been translated into Spanish, Italian and German. A study by Khandan et al. (2018) was designed with the aim of investigating the validity and reliability of the WDQ that was translated into Persian (PWDQ). Khandan et al. (2018) concluded that study results supported the reliability and validity of the PWDQ and that it can be applied as a tool fit to evaluate the characteristics of organisations.

The questionnaire meets the requirements for measurement validity as it represents the reality of what was being measured: employee engagement and job design based on its use in previous studies by other researchers (Havenga et al., 2013, Khandan et al., 2018, Morgeson and Humphrey, 2006). Requirements for content and construct validity are also met as the questions have been found to adequately cover the research questions and measures the presence of the constructs as intended by the researcher (Morgeson and Humphrey, 2006, Havenga et al., 2013).

3.10. Recruitment of participants

The survey was in electronic format and was sent to participants via email. Prior to the survey going out, the researcher contacted participants via telephone as well as sent a pre-notification email of the upcoming questionnaire. This email indicated when they would receive the questionnaire and explained its purpose. The questionnaire included a consent form and cover letter that detailed the importance of the questionnaire and informed participants that their responses would remain confidential. The letter also detailed how the results will be used. Once the survey questionnaire had been distributed, the researcher made follow up calls and emails thanking those who have participated and encouraged responses if they have not

done so. The questionnaire was simple to complete and made of use clear and simple language and instructions to help aid participation. The format used was user friendly.

3.11. Data Analysis and interpretation

SPSS Statistics 25 was used for data analysis. SPSS is software developed by IBM and is used for calculating a variety of statistics and managing data. The process involved downloading the information from the survey into the software. This was followed by defining the variables according to the data they contain. At this point charts were generated to provide visuals for the data that had been collected. The charts gave visual representations of the collected information from which discussion on results was built.

Data was presented in a combination of frequency and descriptive statistics. Frequency was used for interpretation of demographic information and percentages were recorded. Descriptive statistics – range, minimum, maximum, mean and standard deviation were used for interpretation of the rating questions. The rating questions were then combined to form a scale to provide an overall picture of the scale item. Correlation was also used to interpret and assess the strength between various variables. According to Saunders et al. (2016) the correlation coefficient allows for the strength of a linear relationship to be quantified. Where the coefficient is between -1 and +1 the relationship is either negatively or positively correlated respectively. A perfectly positive correlation (+1) means that as values of one variable increase, values of the other variable will increase, the opposite is for a perfectly negative (-1) correlation.

3.12. Ethical considerations

Ethical issues were anticipated for all parties: the researcher, the major construction contracting firm and the respondents. The researcher did not foresee any possibility of harm (physically or psychological) to respondents participating in the study, however ethical clearance was received from the UKZN research ethics committee.

The study involved participants working in the selected organisation. This necessitated a letter of approval for research from the highest senior management representative in the division, which was requested and received prior to data collection.

This study required active participation and therefore the research was conducted with the consent of respondents. Informed consent was requested of each participant prior to their participation in the survey. A confidentiality clause was included in the introductory letter to prompt honest responses. It was understood that privacy is a constitutional right and therefore the introductory letter included a clause that informed the respondent of their freedom to participate in the survey or withdraw at any time. To maintain objectivity, the group of participants in the research were not in the direct reporting structure of the researcher thereby reducing the possibility of vested interest in outcomes that could lead to research bias.

3.13. Conclusion

A quantitative approach to research was selected as the preferred method based on the research philosophy and its suitability with the aims and objectives of the study. The use of a structured questionnaire in the form of an electronic email-based survey was discussed, showing strengths, weaknesses and considerations for the instrument of choice. This chapter also reviewed the population and sample selection as well as the recruitment of participants. Data collection and analysis methods were highlighted, and reliability and validity of the research instrument were explored. Ethical considerations were presented to ensure credibility of the study. The next chapter presents the results obtained in the study. It includes the primary data and in-depth analysis thereof.

Chapter 4 Data Analysis and Discussion

4.1 Introduction

The behaviours, actions, and attitudes of employees can strengthen a company's competitive advantage or cripple its credibility. Attitudes about any construct cannot be seen, and therefore their measurement is through inference based on a response to multiple scale indicators.

This chapter provides primary findings from data collection via the electronic questionnaire. The questionnaire employed for this study measured attitudes. These are the attitudes the participants have towards the latent constructs that make up employee engagement and job design. The constructs employed in this study infer the levels of employee engagement by measuring employee: satisfaction, identification, commitment, and lastly loyalty. Inferences about attitudes towards job design are through questions related to autonomy, task variety, significance and identity, job complexity, information processing, problem-solving skills variety, and specialization.

The preceding chapter explained the process used to gather data for this study. This chapter presents the findings using the descriptive statistical analysis of the quantitative results. This chapter also discusses the interpretation of the results, along with insights gained from the literature review in Chapter 2.

The presentation of the data is such that similarities and differences between respondents are easily recognised.

4.2 Structure of the questionnaire

The questionnaire was made up of three sections. Section A collected data on the demographics of the respondents. Section B measured the constructs of employee engagement. Section C measured the constructs associated with job design. These distinctions were important, and the questionnaire easily obtained the necessary data.

4.3 Description of the sample

The email data base identified 11 candidates for the study. This was the full population of construction managers within the KZN division of the major construction contractor.

The population was less than 50 and therefore required that data be collected from the full population.

4.4 Demographics

This section contains the data disclosed by the respondents concerning their current position, the duration they have been in that position, the years they have been in the construction industry, their gender distribution and highest form of education. This informs certain characteristics of the population of the study. Figures 4-1 to 4.5 are presented below.

Table 0-1 Current position in company

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Senior Site Agent	2	18.2	18.2	18.2
	Site Agent	6	54.5	54.5	72.7
	Assistant Site Agent	3	27.3	27.3	100.0
	Total	11	100.0	100.0	

Table 4-1 displays the position held by the respondents. 55% were site agents, 27% were assistant site agents and 18% were senior site agents.

Table 0-2 Years in position

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-3 Years	4	36.4	36.4	36.4
	3-6 Years	2	18.2	18.2	54.5
	7-10 Years	4	36.4	36.4	90.9
	11-15 Years	1	9.1	9.1	100.0
	Total	11	100.0	100.0	

Table 4-2 shows how many years' participants have been employed in their positions at the time of the study. 36% had been in their positions for either 1-3 years or 7-10 years respectively. 18 % had been in their position for 3 - 6 years and 9% had been in their current position for 11-15 years.

Table 0-3 Years in industry

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3-6 Years	1	9.1	9.1	9.1
	7-10 Years	3	27.3	27.3	36.4
	11-15 Years	6	54.5	54.5	90.9
	16-20 Years	1	9.1	9.1	100.0
	Total	11	100.0	100.0	

Table 4-3 identified that 55% of respondents have been actively working in the construction industry for 11-15 years. 27% have been in the industry for 7-10 years and 9% of respondents have either been in the industry for 3-6 years or 16-20 years respectively.

Table 0-4 Gender distribution

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	10	90.9	90.9	90.9
	Female	1	9.1	9.1	100.0
	Total	11	100.0	100.0	

Table 4-4 gives evidence to the male domination of the industry. Of the participants in the study, only 9% were female and 91% were male.

Table 0-5 Formal qualification level distribution

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Matric Certificate	1	9.1	9.1	9.1
	National Diploma	3	27.3	27.3	36.4
	Bachelor's Degree	6	54.5	54.5	90.9
	Honours Degree	1	9.1	9.1	100.0
	Total	11	100.0	100.0	

Table 4-5 displays that 9% of respondents hold an honours degree, 55% hold a bachelor's degree, 27% have a national diploma and 9% hold a matric certificate.

4.5 Employee engagement

The next segment of the questionnaire was intended to meet the objectives by collecting individual perceptions and attitudes about the attributes that make up employee engagement construct. It was a multi-item instrument as the concept of employee engagement is a function of several attributes; satisfaction, identification, commitment, loyalty and performance. This required the use of composite measures. Each attribute was assigned an overall value through mathematical derivation and an average value was determined for overall engagement levels.

4.5.1 Objective One: To establish existing engagement levels of construction managers in the major construction contracting firm.

The first objective sought to establish the existing levels of engagement among construction workers in the firm. As such, statements were posed under the five attributes of employee engagement to gain a better understanding of each attribute. Respondents used a scale of 1 to 5 to rate their experience with their current employer. A rating of "1" indicated the worst and "5" indicated the best experience. The higher the score the more positive the respondents experience was of a given question and therefore the attribute. An overall measure was taken for each attribute and used as a score to establish the current levels of employee engagement.

Table 0-6 Employee Satisfaction levels

Descriptive Statistics - Employee Satisfaction						
	N	Range	Minimum	Maximum	Mean	Std. Deviation
Receiving recognition for a job	11	3	2	5	3.82	.982
How close do you feel to people at work	11	3	2	5	3.73	.786
How good do you feel about working at this company	11	4	1	5	3.73	1.191
How secure do you feel about your job	11	3	2	5	3.36	1.027

How much do you believe that the management is concerned about employees	11	4	1	5	3.18	1.079
Valid N (listwise)	11					

The term employee satisfaction in this study is the measure of contentedness construction managers have to their overall job circumstances. This measure is irrespective of whether or not they like their job or certain individual aspects of it but does incorporate their interaction with their colleagues and supervisors. Table 4-6 above, shows that on average respondents rated their satisfaction levels above 3 points but below 4 points. “Receiving recognition for a job” received the highest average rating with a mean score of 3.82, while “management’s concern about employees” received the lowest score of 3.18. Satisfied employees were found to be more committed to their work and show lower rates of absenteeism (Kumar and Pansari, 2015, Robbins, 2009). These products of employee satisfaction positively influence the quality of employees work and the services they deliver.

Table 0-7 Overall level of employee satisfaction

Descriptive Statistics - Overall Employee Satisfaction

	N	Range	Minimum	Maximum	Mean	Std. Deviation
EMPLOYEE SATISFACTION - COMPOSITE MEASURE (25)	11	17	8	25	17.82	4.622
Valid N (listwise)	11					

Overall, employee satisfaction achieved a composite measure of 17.82 points out of a possible 25 – see Table 4-7 above. This can be interpreted as achieving 71.28% employee satisfaction among construction managers.

Employees respond to dissatisfaction in four ways: exit, voice, loyalty and neglect. According to Robbins (2009), the exit response involves employees actively seeking new employment and resigning from their current position. The voice response has employees actively seeking ways to improve work conditions and discussing problems with superiors. A loyalty response is when employees passively yet optimistically wait for work conditions to improve. A neglect response is detrimental to a business as

employees passively allow conditions to deteriorate and start expressing behaviours such as absenteeism, tardiness, and reduced effort. The exit and neglect responses impact negatively on productivity and turnover and perpetuate absenteeism(Robbins, 2009).

Satisfied employees have been found to connect better with the organisation's values and goals. According to Kumar and Pansari (2015) , satisfied employees also consider themselves to be a part of the organisation. Literature supports the link between satisfaction and performance indicating that organisations with higher levels of employee satisfaction were more effective (Ostroff, 1992, Harter et al., 2002).

Table 0-8 Employee identification

Descriptive Statistics - Employee Identification						
	N	Range	Minimum	Maximum	Mean	Std. Deviation
Proud to tell others about employment at this company	11	4	1	5	3.91	1.221
Feels a sense of ownership	11	4	1	5	3.82	1.250
Feels a sense of pride	11	4	1	5	3.91	1.221
Views the success of the company brand as your own	11	2	3	5	4.18	.751
Treats this company like family	11	3	2	5	3.55	1.036
Says "we" rather than "they"	11	2	3	5	4.09	.944
Feels like it's a personal compliment when the brand is praised	11	3	2	5	3.82	1.168
Valid N (listwise)	11					

Employee identification refers to how employees identify with the organisation on an emotional level. The questions in the section sought to understand how intertwined construction managers find themselves within the organisation, how emotionally invested they are in the success or failure of the company. In Table 4-8 employee identification responses yielded mean scores above 3.5 but less than 4.5. "Treating the company like family" achieved the lowest rating at 3.55 while "Views the success of the company brand as your own" achieved the highest average score of 4.18. Questions relating to experiences of pride in the company scored 3.91 respectively. The respondents showed a fairly high level of employee identification.

Table 0-9 Overall employee identification

Descriptive Statistics – Overall Employee Identification						
	N	Range	Minimum	Maximum	Mean	Std. Deviation
EMPLOYEE IDENTIFICATION - COMPOSITE MEASURE (35)	11	20	15	35	27.27	6.544
Valid N (listwise)	11					

On average, employee identification achieved a composite measure of 27.27 out of a possible 35 points -see Table 4-9. This translates to a 77.9% overall experience of employees on the identification attribute within the construction contracting firm. This measure is high and indicates that compliments to, and success of the company are considered personal compliments and successes by the individuals. The construction managers take pride in the company brand and see the company as a family in which they have a good sense of ownership. This identification has a positive impact on the maintenance of the existing company culture.

Employee identification has noteworthy influences on employee satisfaction, employee commitment and employee retention or loyalty (Liu et al., 2011). When considering social identity theory, the intensity of and individual's positive personal identity with an organisation, further compels the desire of that individual to strive to act in the organisations best interest (Liu et al., 2011). This is evident in the overall results of this attribute and seen especially in the 4.18 rating achieved for the question – “Views the success of the company brand as your own”. According to Liu et al. (2011) high levels of organisational identification produce motivation on job performance. It can thus be deduced that a positive relationship exists between employee identification and employee performance.

Table 0-10 Employee commitment

Descriptive Statistics - Employee Commitment						
	N	Range	Minimum	Maximum	Mean	Std. Deviation
Your commitment to deliver the company brand promise increases along with knowledge of the company brand	11	1	4	5	4.55	.522
Very committed to delivering the company brand promise	11	1	4	5	4.64	.505
Feels like the company has a great deal of personal meaning	11	3	2	5	3.73	1.009
Valid N (listwise)	11					

Employee commitment achieved the highest mean scores when compared to all other sections. Employee commitment forms an essential aspect of employee engagement; it encourages employees to do more than their job specifications require. Table 4-10 shows an average score of 4.64 for “Very committed to delivering the company brand promise.” “Your commitment to deliver the company brand promise increases along with knowledge of the company brand”, achieved a mean of 4.55, the second highest recorded in the employee engagement section of the survey.

Kahn (2010) identified commitment as being expressed when employees focus on their tasks and show care when fulfilling their duties. Employee commitment has been found to be positively correlated to employee identification (Kumar and Pansari, 2014). Employees who identify with the organisation are more inclined to show greater commitment and less likely to leave.

Table 0-11 Overall employee commitment

Descriptive Statistics - Employee commitment						
	N	Range	Minimum	Maximum	Mean	Std. Deviation
EMPLOYEE COMMITMENT - COMPOSITE MEASURE (15)	11	5	10	15	12.91	1.700
Valid N (listwise)	11					

Table 4-11 reveals the average level of employee commitment is 86.06%. This was determined from the 12.91 overall score achieved weighed against the maximum score achievable of 15. Commitment of construction managers in this firm is high. This could be due to the length of time employees have been in the position, as commitment develops over time and shared experiences (Kumar and Pansari, 2014). Another outcomes of high commitment is increased employee retention (Meyer et al., 2004). The retention aspect may be skewed when compared with employee loyalty. At the time of the study it was found that employee loyalty scored the lowest overall.

Table 0-12 Employee loyalty

Descriptive Statistics - Employee Loyalty						
	N	Range	Minimum	Maximum	Mean	Std. Deviation
Content to spend the rest of your career in this organization	11	4	1	5	3.27	1.348
Do not have intention to change to another organization	11	4	1	5	2.55	1.368
Intention to stay is driven by competency in delivering the company brand promise	11	4	1	5	3.64	1.286
Valid N (listwise)	11					

Employee loyalty reflects a positive attitude concerning the company and has the potential to motivate employees to do more than expected which can have positive impacts on the bottom line of the company.

Table 4-12 shows that the responses by respondents on their perception of employee loyalty. The question “Intentions of changing to another organization” received the lowest average rating of all the questions in the employee engagement section of the questionnaire - 2.55 and the largest single standard deviation. This indicates a wider variance in responses from the mean/average.

Fleck and Inceoglu (2010) argue that professed intentions to stay can be a result of situational factors such as fear of job safety. At the time of the study the contracting firm was retrenching, this may have skewed the reality of the individual’s intentions to stay with the company and impacted the overall final engagement level.

Table 0-13 Overall employee loyalty

Descriptive Statistics - Employee Loyalty						
	N	Range	Minimum	Maximum	Mean	Std. Deviation
EMPLOYEE LOYALTY - COMPOSITE MEASURE (15)	11	11	4	15	9.45	3.387
Valid N (listwise)	11					

Loyal employees with high levels of job satisfaction demonstrate their loyalty by working harder and committing to delivery of services at a high quality (Yee, Yeung, & Cheng, 2010). Overall employee loyalty of the respondents was measured in Table 4-13. The average score was 9.45 which translated to 63% when compared to the total points achievable. Employee loyalty is low when compared to other attributes measured for employee engagement. This shows a potential risk for loss of much needed skilled talent within the construction firm and loss of customer satisfaction. According Kumar and Pansari (2014) the positive attitude of loyal employees projects onto customers and results in greater customer satisfaction and therefore greater overall organisational performance.

Table 0-14 Employee performance

Descriptive Statistics - Employee Performance						
	N	Range	Minimum	Maximum	Mean	Std. Deviation
Your performance in the last appraisal exceeded expectations	11	2	3	5	4.00	.775
You believe there is increased opportunity for improved performance in this company	11	3	2	5	4.18	.982
Valid N (listwise)	11					

Employee performance is the quality of service the construction managers provide to clients and stakeholders. The employee performance questions achieved scores of 4 and above. In Table 4-14 employee belief in increased opportunity for improved performance within the company was rated high at 4.18. Opportunities' for increase

performance can be occasioned by focusing on training programmes for employees and orientating employees on company activities and behaviours to enhance their knowledge and skill sets (Wärnich et al., 2018, Kumar and Pansari, 2014).

Table 0-15 Overall employee performance

Descriptive Statistics - Employee performance						
	N	Range	Minimum	Maximum	Mean	Std. Deviation
EMPLOYEE PERFORMANCE - COMPOSITE MEASURE (10)	11	4	6	10	8.18	1.250
Valid N (listwise)	11					

Table 4-15 indicates that perceptions of the employee performance attribute in employee engagement is at 81.8%. This is derived from the mean of 8.18 measured against the maximum measure of 10. The overall high rating shows that currently employees are positive about their current performance and they receive good levels of attention and training. When performance is improved through training and empowerment, stronger bonds are created between the employer and employee and this could offset and risks associated with low loyalty levels (Kumar and Pansari, 2014).

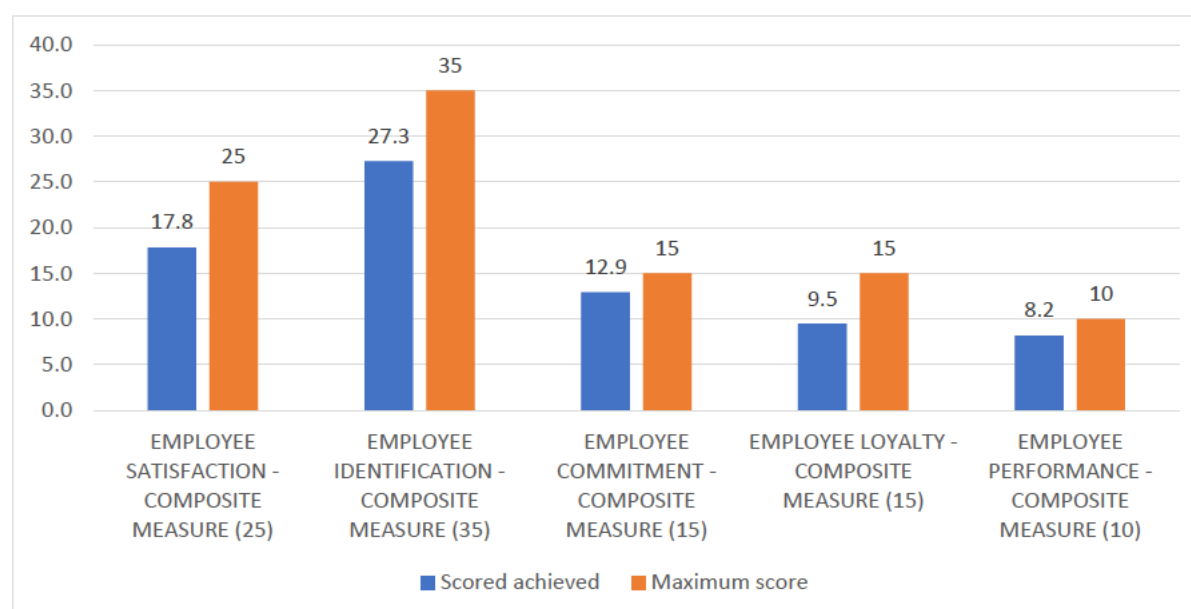


Figure 4-1 Comparison of overall employee engagement measures against maximum points achievable.

Figure 4-1 gives a graphical representation of the measured ratings for the attributes of employee engagement against the maximum scores achievable. Employee commitment achieved the highest percentage of 86% while employee loyalty was lowest at 63.3%. Employee performance achieved 82%, employee satisfaction and employee identification achieved 71% and 78% respectively. As a percentage, 71% (employee satisfaction) seems high however, as data analysis continues, it will be clear that of all the attributes that were measured to determine levels of employee engagement, employee satisfaction achieved the second lowest measure. This indicates that overall, satisfaction levels of employees can be improved.

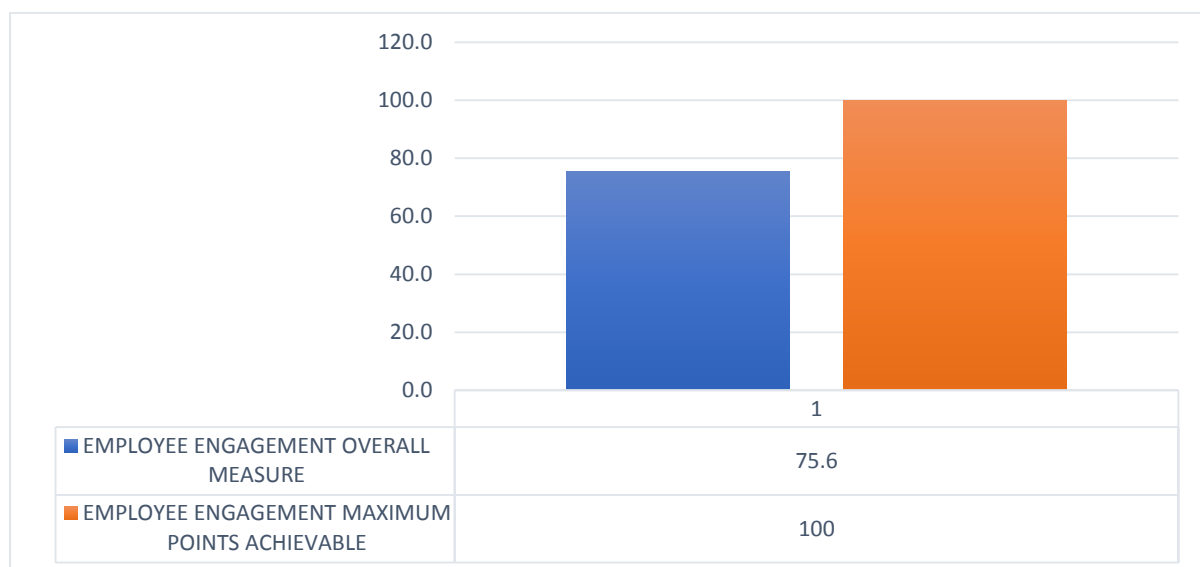


Figure 4-2 Overall employee engagement measure achieved against maximum points achievable.

Employee engagement levels of the construction managers within the specific construction contracting firm measured at 75.6 out of a potential 100 points -Figure 4-2. This measure is relevant for motivation and implies that these construction managers are psychologically present at work. It can thus be inferred that they experience high levels of meaning in their work and employ more effort (Kahn, 1992). This effort translates to positive business outcomes and increased involvement by employees can greatly assist the construction firm in achieving competitive advantage. Outcomes that can be impacted positively by high engagement levels are of employee retention, profit, productivity and customer satisfaction (Buckingham and Coffman,

1999, J., 2014, Anitha, 2014, Albrecht et al., 2015, Dromey, 2014b) making effective engagement of staff a priority for any employer.

The high levels of engagement and commitment are in line with the findings by Dromey (2014b), that when compared to other industries, construction showed significantly higher levels of engagement and organisational commitment.

A study by Kumar and Pansari (2015) found that a company with a core of 60-79 points achieved higher than normal employee engagement levels but there was still room for improvement and opportunity to use employee engagement best practices to increase the levels of engagement. The same can be said for the measure achieved in this study.

4.5.2 Correlations on attributes of employee engagement

Table 0-16 Correlations between attributes of employee engagement

		Correlations				
		EMPLOYEE SATISFACT ION - COMPOSIT E MEASURE (25)	EMPLOYEE IDENTIFIC ATION - COMPOSIT E MEASURE (35)	EMPLOYEE COMMITM ENT - COMPOSIT E MEASURE (15)	EMPLOYEE LOYALTY - COMPOSIT E MEASURE (15)	EMPLOYEE PERFORM ANCE - COMPOSIT E MEASURE (10)
EMPLOYEE SATISFACTION - COMPOSITE MEASURE (25)	Pearson Correlation	1	.888**	.723*	.734*	.646*
	Sig. (2-tailed)		.000	.012	.010	.032
	N	11	11	11	11	11
EMPLOYEE IDENTIFICATION - COMPOSITE MEASURE (35)	Pearson Correlation	.888**	1	.748**	.765**	.763**
	Sig. (2-tailed)	.000		.008	.006	.006
	N	11	11	11	11	11
EMPLOYEE COMMITMENT - COMPOSITE MEASURE (15)	Pearson Correlation	.723*	.748**	1	.633*	.573
	Sig. (2-tailed)	.012	.008		.037	.065
	N	11	11	11	11	11
EMPLOYEE LOYALTY -	Pearson Correlation	.734*	.765**	.633*	1	.663*
	Sig. (2-tailed)	.010	.006	.037		.026

COMPOSITE MEASURE (15)	N	11	11	11	11	11
EMPLOYEE PERFORMANCE - COMPOSITE MEASURE (10)	Pearson Correlation	.646*	.763**	.573	.663*	1
	Sig. (2-tailed)	.032	.006	.065	.026	
	N	11	11	11	11	11

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

A correlation matrix in Table 4-16 examines the relationship between the composite measures for the 5 attributes of employee engagement. Pearson's correlation coefficient established the covariance between the variables. Saunders et al. (2016) describes the covariance as "how much a change in one variable relates systematically to a change in another." (p.561). Very strong positive relationships exist between employee satisfaction and employee identification with $\sigma = 0.888$ and employee loyalty and employee identification where $\sigma = 0.765$. The results indicate that strong positive relationships exist amongst most of the variables. This means the greater the value of a certain variable, the likelihood of the other variable increasing is also high.

4.6 Job Design

The final section of the questionnaire was based on answering the second objective. These questions set out to establish the characteristics of the job. Job design is a construct that is a function of several attributes. For this study, variables attributable to job design were identified as autonomy, task variety, task significance, task identity, feedback from the job, job complexity, information processing, problem solving. skill variety, and specialisation. Respondents used a scale of 1 to 5, where "1" equalled strongly disagree and "5" equalled strongly agree, to indicate the extent of their agreement with the statement.

4.6.1 Objective Two: To determine current perception of job design for construction managers and its impact on employee engagement.

Table 0-17 Autonomy

Descriptive Statistics - Autonomy						
	N	Range	Minimum	Maximum	Mean	Std. Deviation
The job allows me to make my own decisions about how to schedule my work.	11	3	2	5	4.45	.934
The job allows me to decide on the order in which things are done on the job.	11	3	2	5	4.36	1.027
The job allows me to plan how I do my work.	11	1	4	5	4.55	.522
The job gives me a chance to use my personal initiative or judgment in carrying out the work.	11	1	4	5	4.64	.505
The job allows me to make a lot of decisions on my own.	11	1	4	5	4.45	.522
The job provides me with significant autonomy in making decisions.	11	2	3	5	4.18	.751
The job allows me to make decisions about what methods I use to complete my work.	11	1	4	5	4.45	.522
The job gives me considerable opportunity for independence and freedom in how I do the work	11	1	4	5	4.36	.505
The job allows me to decide on my own how to go about doing my work	11	2	3	5	4.36	.674
Valid N (listwise)	11					

Task attributes of the job were investigated in this section of the questionnaire. In Table 4-17 questions regarding autonomy in the job yielded very positive scores. The average score of all the questions was above 4. In some cases, the slight difference

between minimum and maximum scores as well as low standard deviation represent a positive perception about this aspect of the job. Autonomy is the total liberty and independence one has in terms of doing their work (Robbins, 2009).

Table 0-18 Overall on autonomy

Descriptive Statistics - Overall Autonomy						
	N	Range	Minimum	Maximum	Mean	Std. Deviation
AUTONOMY - COMPOSITE MEASURE (45)	11	13	32	45	39.82	4.191
Valid N (listwise)	11					

On average autonomy in the job (Table 4-18) was rated as a cumulative 39.82 of a possible 45. This translates to 88.48% overall, a positive result for this specific attribute. The high percentage indicated a comparatively high level of work autonomy experienced by the construction managers. Autonomy as a construct has its founding in motivation theory and the higher the level of autonomy experienced, the more motivated employees are about their work (Morgeson and Humphrey, 2006, Robbins, 2009).

According to Fenton-O'Creevy (2003) when control is given to workers on how to achieve their goals, those goals can be achieved easier. The greater control improves engagement levels.

Table 0-19 Task variety

Descriptive Statistics - Task Variety						
	N	Range	Minimum	Maximum	Mean	Std. Deviation
The job involves a great deal of task variety	11	1	4	5	4.73	.467
The job involves doing a number of different things.	11	1	4	5	4.64	.505
The job requires the performance of a wide range of tasks.	11	1	4	5	4.64	.505
The job involves performing a variety of tasks.	11	1	4	5	4.45	.522
Valid N (listwise)	11					

According to Morgeson and Humphrey (2006) task variety refers to the extent to which a job requires an employee to perform a wide range of tasks. Table 4-19 indicates average responses to questions relating to task variety in the job. For all questions the minimum rating was 4 resulting in averages greater than 4 with standard deviations that are less than one, an indication of a short distribution of variance in responses. When reflecting on the work activities required of a construction manager it can be inferred that there is significant task variety in the job.

Table 0-20 Overall task variety

Descriptive Statistics - Overall Task Variety

	N	Range	Minimum	Maximum	Mean	Std. Deviation
TASK VARIETY - COMPOSITE MEASURE (20)	11	4	16	20	18.45	1.695
Valid N (listwise)	11					

The composite measure of task variety indicated in Table 4-20 shows an average of 18.45 which translates to 92.25% of the maximum score achievable. This percentage is extremely high confirming the work activities of a construction manager are varied. It should be noted that performing a variety of different tasks or work activities makes work more interesting and enjoyable to perform (Morgeson and Humphrey, 2006). When employees find work interesting, they level of engagement increases.

Table 0-21 Task significance

Descriptive Statistics -Task Significance

	N	Range	Minimum	Maximum	Mean	Std. Deviation
The results of my work are likely to significantly affect the lives of other people.	11	3	2	5	4.09	.831
The job itself is very significant and important in the broader scheme of things	11	2	3	5	4.09	.539
The job has a large impact on people outside the organization	11	3	2	5	4.00	.894

The work performed on the job has a significant impact on people outside the organization.	11	2	2	4	3.64	.674
Valid N (listwise)	11					

Task significance as illustrated in Table 4-21 measures to what extent a job influences the work or lives of others, both inside and outside the organisation. Above, task significance received its lowest average score of 3.64 in the question “The work performed on the job has a significant impact on people outside the organization”. The two highest rating averages were 4.09 and were answers to the statements – “the results of my work are likely to significantly affect the lives of other people”, and “The job itself is very significant and important in the broader scheme of things”.

Table 0-22 Overall on task significance

Descriptive Statistics – Overall Task Significance

	N	Range	Minimum	Maximum	Mean	Std. Deviation
TASK SIGNIFICANCE - COMPOSITE MEASURE (20)	11	8	10	18	15.82	2.359
Valid N (listwise)	11					

In comparison to other attributes of job design, task significance (in Table 4-22 above) achieved an average of 15.82 which translates to 79.1%. According to Morgeson and Humphrey (2006), jobs that involve the well-being of people are likely to experience a significant effect (physical or psychological) that is greater and more meaningful. Meaningfulness was established by May et al. (2004) to demonstrate the strongest relation to engagement. Construction management is currently not wholly concerned with the well-being of people and as such, employees may not have a more meaningful experience about the work. The score of 3.64 on the question of “the work performed on the job has a significant impact on people outside the organization”

Table 0-23 Task identity

Descriptive Statistics - Task Identity						
	N	Range	Minimum	Maximum	Mean	Std. Deviation
The job involves completing a piece of work that has an obvious beginning and end.	11	2	3	5	4.73	.647
The job is arranged so that I can do an entire piece of work from beginning to end	11	3	2	5	4.09	.944
The job provides me the chance to completely finish the pieces of work I begin	11	2	3	5	4.09	.831
The job allows me to complete work I start.	11	2	3	5	4.00	.775
Valid N (listwise)	11					

Task identity in Table 4-23 obtained high means, with the lowest being 4.0 in response to the question “The job allows me to complete work I start.” And the highest average rating being 4.73 for “The job involves completing a piece of work that has an obvious beginning and end.” Task identity reflects the extent to which a job involves a whole piece of work and which has results that can easily be identified (Morgeson and Humphrey, 2006). Focusing on tasks and showing care in the work was identified by Kahn (2010) as being an expression of employee commitment.

Table 0-24 Overall task identity

Descriptive Statistics – Overall task identity						
	N	Range	Minimum	Maximum	Mean	Std. Deviation
TASK IDENTITY - COMPOSITE MEASURE (20)	11	7	13	20	16.91	2.343
Valid N (listwise)	11					

Respondents rated task identity as an overall 16.91 (Table 4-24) which translates to 84.55% of the achievable 20 points. The data confirms that on average, the work done by construction managers is easily identifiable as a whole piece of work and that results thereof can be measured easily.

Table 0-25 Feedback from the job

Descriptive Statistics - Feedback from job						
	N	Range	Minimum	Maximum	Mean	Std. Deviation
The work activities themselves provide direct and clear information about the effectiveness (e.g., quality and quantity) of my job performance.	11	2	3	5	4.36	.674
The job itself provides feedback on my performance	11	1	4	5	4.55	.522
The job itself provides me with information about my performance.	11	1	4	5	4.45	.522
Valid N (listwise)	11					

Feedback from the job refers to the extent to which a job offers direct and clear information regarding the effectiveness of task performance. Table 4- 25 demonstrates the high average scores for questions regarding receiving feedback from the job. Respondents had exceptionally positive responses to these questions. The high averages infer that feedback is received in levels acceptable to the respondents and can be viewed as good means to improve knowledge of the results of the job.

Table 0-26 Overall feedback from job

Descriptive Statistics - Overall feedback from job						
	N	Range	Minimum	Maximum	Mean	Std. Deviation
FEEDBACK FROM JOB - COMPOSITE MEASURE (15)	11	4	11	15	13.36	1.433
Valid N (listwise)	11					

Table 4-26 shows that overall, feedback from the job on average scored 13.36. This is 89% of the maximum score. This indicates overall positive perception of the feedback respondents receive for their work.

Table 0-27 Job complexity

Descriptive Statistics - Job Complexity						
	N	Range	Minimum	Maximum	Mean	Std. Deviation
The job requires that I only do one task or activity at a time	11	2	1	3	1.45	.688
The tasks on the job are simple and uncomplicated	11	3	1	4	1.82	.874
The job comprises relatively uncomplicated tasks	11	2	1	3	1.91	.831
The job involves performing relatively simple tasks	11	2	1	3	1.82	.751
Valid N (listwise)	11					

Job complexity means to the extent to which job tasks are intricate and difficult to perform. In Table 4-27 the responses to these questions made use of reverse coding as the questions were addressing what is considered negative items. For this attribute, responses were treated differently to others in the questionnaire. The means calculated are very low – strongly disagree, however the interpretation of the final outcome is viewed in a positive light. The lower the score the more positive the perception of the attribute. The average of 1.45 for the question “The job requires that I only do one task or activity at a time” is the lowest in the set of questions. It is interpreted as the strong level of disagreement to the statement. The job consists of many tasks that must be done at the same time.

Table 0-28 Employee identification

Descriptive Statistics - Overall job complexity						
	N	Range	Minimum	Maximum	Mean	Std. Deviation
JOB COMPLEXITY - COMPOSITE MEASURE (20)	11	6	4	10	7.00	2.366
Valid N (listwise)	11					

Reverse coding allowed for the mean for the overall job complexity to measure at 7 out of a total of 20 (see Table 4-28 above). This is a positive low of 35% indicating the high complexity of the respondent's jobs. Work that is highly complex, requires the use

of numerous high-level skills which is mentally demanding, challenging and results in increased motivation.

Table 0-29 Information processing

Descriptive Statistics - Information processing						
	N	Range	Minimum	Maximum	Mean	Std. Deviation
The job requires me to monitor a great deal of information.	11	1	4	5	4.82	.405
The job requires that I engage in a large amount of thinking.	11	1	4	5	4.73	.467
The job requires me to keep track of more than one thing at a time.	11	1	4	5	4.82	.405
The job requires me to analyse a lot of information.	11	1	4	5	4.73	.467
Valid N (listwise)	11					

Information processing questions shown in Table 4-29 achieved very high scores. All questions achieved a minimum rating of 4 and a maximum of 5 for this attribute. The degree to which information processing is needed at work reflects the degree to which the job requires attending to and processing data (Morgeson and Humphrey, 2006). The question “the job requires me to keep track of more than one thing at a time” and “the job requires me to keep track of more than one thing at a time. Achieved 4.82 points respectively.

Table 0-30 Overall information processing

Descriptive Statistics - Overall Information processing						
	N	Range	Minimum	Maximum	Mean	Std. Deviation
INFORMATION PROCESSING - COMPOSITE MEASURE (20)	11	4	16	20	19.09	1.300
Valid N (listwise)	11					

Of all the composite measures used to measure levels of job design, Information processing was the highest average attribute -Table 4-30. It collected 95.45% from the

19.09 mean of the maximum of 20. This confirms that the work of construction managers involves a significant amount of information processing. High levels of information processing translates to high cognitive demands on an individual and is characteristic of motivational theory due to the complexity of enriched work (Morgeson and Humphrey, 2006).

Table 0-31 Problem solving

Descriptive Statistics - Problem Solving						
	N	Range	Minimum	Maximum	Mean	Std. Deviation
The job involves solving problems that have no obvious correct answer.	11	3	2	5	3.82	1.168
The job requires me to be creative.	11	2	3	5	4.18	.603
The job often involves dealing with problems that I have not met before.	11	2	3	5	4.09	.701
The job requires unique ideas or solutions to problems.	11	2	3	5	3.82	.751
Valid N (listwise)	11					

Problem solving attribute signifies the degree to which a job requires distinctive ideas or solutions. Table 4-31 shows that respondent perceptions of problems they encounter in the job are higher/ more positive for problem uniqueness and creativity (4.18 and 4.09) than for questions regarding the solutions for those problems (3.82). This reflects the active cognitive processing requirements for the job.

Table 0-32 Overall problem solving

Descriptive Statistics - Overall problem solving						
	N	Range	Minimum	Maximum	Mean	Std. Deviation
PROBLEM SOLVING - COMPOSITE MEASURE (20)	11	8	12	20	15.91	2.625
Valid N (listwise)	11					

Table 4-32 shows the problem solving nature of the job is rated at 79.55%. The standard deviation indicated that responses had a wider than usual overall variance. This shows that respondents have differing perceptions of the problem solving in their

specific work. The nature of problem solving requires the generation of unique ideas and solutions, diagnosing and solving unplanned problems and recovering from errors (Morgeson and Humphrey, 2006). According to Morgeson and Humphrey (2006) problem solving is conceptually related to the information demands of a job as it draws on the creative ability of individuals.

Table 0-33 Skills variety

Descriptive Statistics - Skills Variety						
	N	Range	Minimum	Maximum	Mean	Std. Deviation
The job requires a variety of skills.	11	1	4	5	4.55	.522
The job requires me to utilize a variety of different skills in order to complete the work.	11	1	4	5	4.64	.505
The job requires me to use a number of complex or high-level skills.	11	2	3	5	4.00	.632
The job requires the use of a number of skills.	11	2	3	5	4.18	.603
Valid N (listwise)	11					

The extent to which a job requires an individual to use a variety of skills to complete the work has been referred to as skill variety in this study. Table 4-33 shows the positive average response rate for the skills variety attribute of the job design construct. All questions were rated an average of 4 and above. Majority of respondents agreed the "... job requires me to utilize a variety of different skills in order to complete the work" showing only a range of 1 between minimum and maximum ratings available. The high scoring responses indicate that multiple skills are required by construction managers to perform their various tasks. This is in line with the vast list of work activities to be performed by a construction manager (SACPCMP, 2006)

Table 0-34 Overall skills variety

Descriptive Statistics - Overall skills variety						
	N	Range	Minimum	Maximum	Mean	Std. Deviation
SKILL VARIETY - COMPOSITE MEASURE (20)	11	6	14	20	17.36	1.804
Valid N (listwise)	11					

The overall composite measure for skills variety was 17.36 out of a possible 20 – see Table 4-34 above. This translates to an outcome of 86.8%. This shows that of the work construction managers do, is largely believed to require a variety of skills. The use of multiple skills has been found to be challenging and thereby engaging to perform.

Table 0-35 Specialisation

Descriptive Statistics - Specialization						
	N	Range	Minimum	Maximum	Mean	Std. Deviation
The job is highly specialized in terms of purpose, tasks, or activities.	11	2	3	5	3.91	.701
The tools, procedures, materials, and so forth used on this job are highly specialized in terms of purpose	11	4	1	5	3.73	1.104
The job requires very specialized knowledge and skills.	11	2	3	5	4.00	.632
The job requires a depth of knowledge and expertise.	11	2	3	5	4.36	.674
Valid N (listwise)	11					

Specialization indicates how much a job involves performing specialized tasks or processing specific knowledge and skill. Questions on specialization (Table 4-35) revealed respondents believed that the depth of knowledge and expertise required for the job was high, receiving an average rating of 4.36. The tools, procedures, materials, and so forth used on this job were fairly specialized, achieving an average of 3.73. This response also showed the highest standard deviation when compared to other questions indicating a wider variance in responses among respondents.

Table 0-36 Overall specialisation

Descriptive Statistics - Overall Specialization						
	N	Range	Minimum	Maximum	Mean	Std. Deviation

SPECIALIZATION - COMPOSITE MEASURE (20)	11	7	12	19	16.00	2.280
Valid N (listwise)	11					

Table 4-36 shows that respondents on average believe there to be a high level of specialization in their work. Specialization achieved an 80% rating overall. This result reflects highly on the depth of knowledge skill required to perform the job of a construction manager.

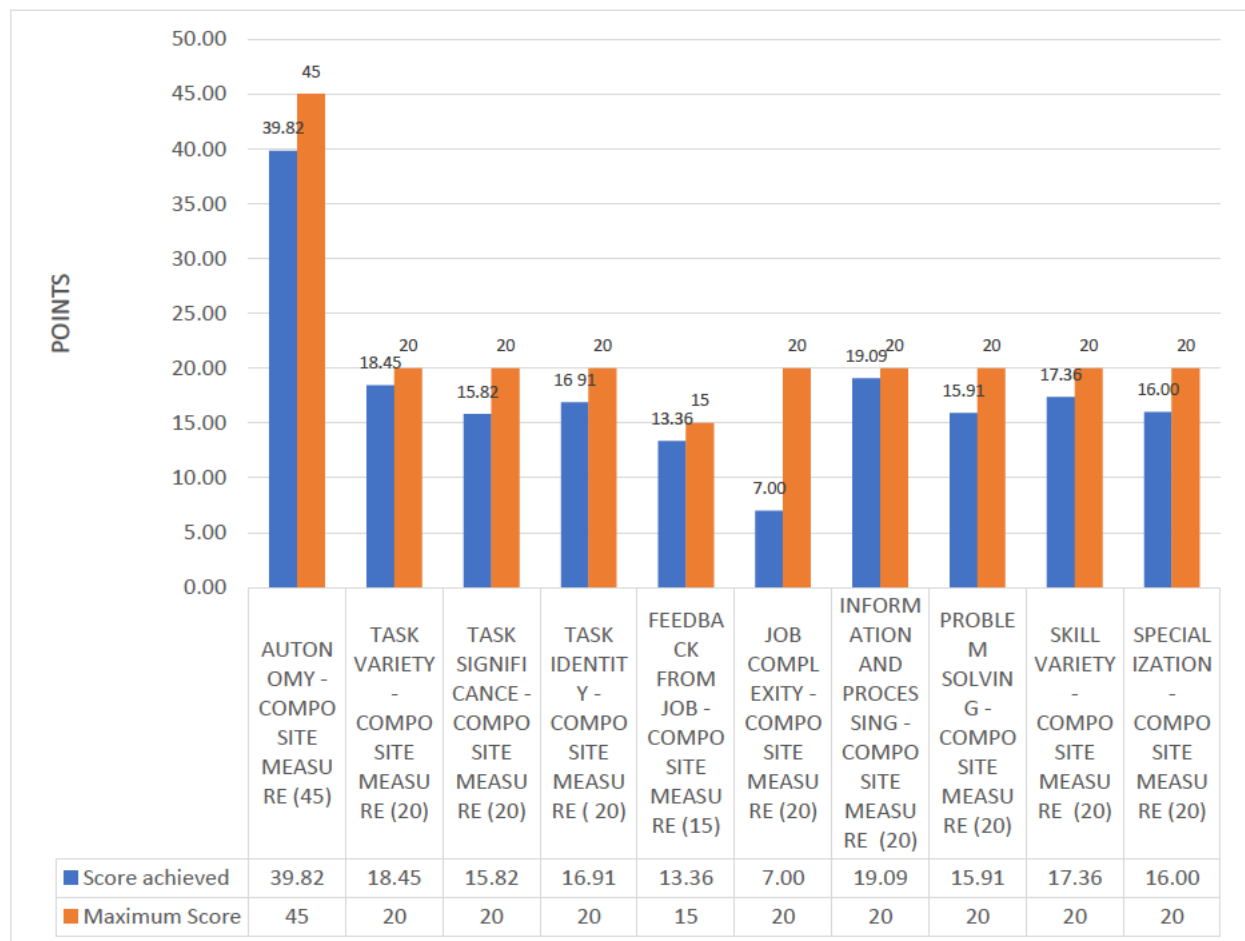


Figure 4-3 Overall job design attribute measures achieved against maximum points achievable.

Collecting information on the work as experienced by the construction managers will support better business and project performance. Figure 4-3 is a graphical representation of the composite measures for the 10 attributes that make up job

design. Information processing as well as task variety were two of the highest scoring attributes amongst respondents. Job design is based on the principles of motivation (Morgeson and Humphrey, 2006) and the overall results imply a high level of motivation of the construction managers. This has the benefits of improved outcomes in job satisfaction – evident in the levels recorded in the employee engagement section.

Job design concept incorporates what Bakker and Demerouti (2007) describe as job resources. Job resources in the JD-R Model include autonomy, supervisory support and feedback, job resources increase employee motivation. Bakker and Demerouti (2007) established that job resources have an influence over work engagement and impact on outcomes such as creativity, in-role performance, extra-role performance and financial returns. The autonomy and feedback results from this study are 80.77% and 89.06% respectively. This supports the overall high level of engagement measured and implies a high level of motivation and positive impact on organisational outcomes.

Overall, the intrinsic elements of autonomy, significance, identity, variety and feedback are high in the construction managers and thus the job characteristics model predicts that construction managers are satisfied and generate higher performance as a result of the design of their jobs (Robbins, 2009).

4. 7 Objective three: To identify critical activities in the work of construction managers that are required for successful project delivery.

For employee engagement and job design to be understood within the construction context, there was a requirement to identify the work of construction managers. A review of literature on critical work activities for construction managers was done. A summary of the information is presented in this section.

4.7.1 Construction managers and their work

Construction managers are the single point of responsibility when delivering a construction project on behalf of a construction contractor. As managers they control the experience of other employees within their sphere of influence. Their level of engagement therefore has significant impact on the project as a whole.

Psychological presence at work is promoted by the concept of job fit (Kahn, 1992). Job fit occurs when the work matches the inherent interests and skills of its intended role occupier. A misalignment between job and the employee can risk engagement. Poorly designed jobs have been found to exhaust employees both physically and mentally and result in withdrawal from active involvement in work.

SACPCMP (2006) categorises the work of construction managers in two: technical and project management. Each category requires the construction manager to perform a variety of skills across the duration of a project.

Technical competencies include building science, building processes, design processes and financial cost aspects. Each of these subcategories have specific skills and knowledge requirements for successful operation as a construction manager.

Project management competencies include understanding principles of law and contracts, specifically construction contract. Good communications and stakeholder management, time and scope management abilities, quality orientation, cost management, health and safety and subcontractor management.

The requirements of the role of construction manager shows that their jobs incorporate the characteristics of a well-designed job – skills variety, task identity, task significance, autonomy and feedback (Garg and Rastogi, 2006). This is supported by the overall results each attribute achieved in the study. The overall percentages for each attribute are as follows:

Table 0-37 Overall percentage per attribute of job design

Attribute of Job Design	Percentage Calculation
Autonomy	80.77%
Task Variety	92.25%
Task Significance	79.1%
Task identity	84.55%
Skills Variety	86.8%
Feedback from the Job	89.06%

The identified work of construction managers creates conditions for high motivation, satisfaction and performance. In Table 4-37 the design of the jobs shows clear elements of independence and provision of feedback, this allows employees to experience meaningfulness, responsibility and knowledge in the results of their work.

The job of a construction manager is categorised as a motivation intensive job (Wärnich et al., 2018). This in comparison to a specialization intensive job that is considered easier to manage but run the risk of employees becoming bored with their work and result in disengagement (Wärnich et al., 2018). Motivation-intensive jobs have varying levels of specialisation, little repetition, high social interaction and have depth in the job dimension. The advantage to this approach to job design is : higher productivity due to employees being challenged, low levels of absenteeism, higher product quality, lower employee turnover and increased job satisfaction (Robbins, 2009, Wärnich et al., 2018).

4.8 Conclusion

This chapter presented the results of the data analysis and discussion on the various findings. The results were based on the first three objectives of the study that were presented in Chapter 1. The remaining objective was discussed in the literature review and will be informed by the results achieved from the analysis and discussed in Chapter 5.

Respondents views regarding the attributes of employee engagement were positive with overall composite measures of attributes achieving a score of over 70%. Employee loyalty achieved the lowest rating of 63%, this comes as employees rated their intention to stay within the organisation as low as 2.55. The combination of all the attributes arrived at employee engagement level of 75.6 among the respondents. This is a positive result indicating that in general employees have a good level of engagement.

Statements concerning job design also yielded positive responses. Information processing measured the highest score of 95.45% indicating that the work the construction managers do involves a high level of information processing of that information. Overall perception on job design attributes were positive. The reverse measure of Job complexity indicated that work done by the construction managers is indeed complex. The next chapter concludes the study and makes recommendations.

Chapter 5 Conclusion and Recommendations

5.1 Introduction

The preceding chapter presented data collected from the study and discussed the findings in relation to the literature. This chapter concludes the study and covers the outcomes and recommendations of the study. It also outlines the limitations of the study and suggestions for future research.

The research was conducted using a quantitative approach. This was in the form of an electronic questionnaire that was distributed via email to the construction managers in the contracting firm. The participants formed the population and the required sample due to the small population size. The overall purpose over the study was to determine areas where improvements can be made in employee engagement and job design so that productivity can be positively impacted in the work of construction managers.

5.2 Conclusions based on the objectives and findings of the study

The conclusions discussed below are a summation on the findings of the study that was carried out based on the objectives of the study, the research questions that were posed, the data that was collected and the literature that was reviewed

5.2.1 Employee engagement

The literature verifies that construction contractors and the construction industry have been wasting talent due to failure of contractors in recognizing the benefits associated with engaged employees. Construction managers are a unique human resource for a construction contracting firm. They possess certain firm and industry specific skills and knowledge that allow for unique value creation strategies in the execution of construction projects. When construction managers display personally engaging behaviour, they bring the best of themselves to their roles. They are physically involved in their tasks, cognitively vigilant and can create empathetic connections with others as well as in the work they are doing. However, engagement levels fluctuate over time and in different situations, this means that firms will incur a cost for maintaining engagement levels of employees. The existing employee engagement level shows that the construction managers are bringing their best selves to work.

The results on employee engagement are high but can be improved. Employee engagement is founded on trust, integrity and two-way communication between the

organisation and the members. In this sense construction managers engage in a context of systems that they find trustworthy, predictable and sensible.

The level of employee satisfaction averaged 71%. In comparison to other attributes, employee satisfaction was the second lowest scoring attribute. The lowest result was attributable to employee loyalty - 63%. The importance of the satisfaction levels lies in the research that supports the reduced levels of absenteeism and greater commitment to work by employees with higher levels of employee satisfaction. Satisfied and committed employees perform better on the job.

Employee loyalty is another area of improvement for this contracting firm and any other in the construction industry. Had it not been for the current shortage of skills in the industry and a scramble to retain good workers, a low score could have been written off as evidence of the general decline in employee loyalty across industries.

The results show that the overall high levels of employee engagement give evidence to the presence of enhanced job performance, organisational citizenship behaviour, discretionary effort, task performance, productivity, affective communication and continuation of commitment of the construction managers

The literature review established that some significant determinants exist for employee engagement. They are:

Work environment – When management fosters a supportive working environment that demonstrates concern for employees' requirements and emotions, encourages voicing of concerns, offers positive feedback and helps advance new skills to resolve work-related problems, employee engagement levels are boosted.

Leadership – effective leadership comprises self-awareness, balanced processing of information, transparency in relationships as well as internalised moral standards. When leadership is inspiring, engagement naturally occurs. Construction managers are led but are also leaders of specific projects. This makes good communication from senior leadership to construction managers important. When their work is considered important and meaningful, interest is peaked, and engagement levels rise.

Team and co-worker – this relates to the interpersonal aspect of employee engagement. When a team is supportive and trusting, engagement is promoted. This

determinant supports the concept of meaningfulness and safety associated with psychological presence characteristic of engagement.

Training and career development – this dimension help employees focus and concentrate on work. Training impacts engagement through improvement of business interactions and thereby by performance. Training and career development build confidence in employees and motivates them to be more engaged in their jobs.

Organisational policies - procedures, policies, systems and structures determine what extent employees are engaged in an organisation. Policies and procedures that may affect engagement are recruitment and selection, flexi-timing, assistance in work life balance and fair promotional policies.

Valuing employees and understanding their perception of their work can improve their levels of engagement and with this motivation, improve the performance of the teams. Given the responsibility of construction managers, a construction contractor should put in place systems that generate positive job attitudes to reduce the levels of resignations and absenteeism especially amongst their most productive employees.

5.2.2 Job design

The literature review also identified that psychological presence at work is promoted through jobs. When jobs fail to match interests or skills, any employer would run the risk of negatively affecting engagement. Employees would withdraw from their active involvement in work.

The high ratings allocated to the attributes of job design implied a good fit to the work environment and thus also support the high level of engagement. This is based on work environment being a driver of engagement.

Work characteristics are placed into three major categories: motivational, social and contextual. This study covered only those characteristics identified as motivational and further subdivided into aspects of complexity, task and knowledge requirements.

Task variety is currently very high. Increasing task variety may result in job overload in an already complex job. However, if the contracting firm wants to increase satisfaction, increases in specialization can prove more effective.

Job design attributes can be linked to engagement, but also to motivation. Literature exists that's of the view that motivation and not engagement improves productivity. However, a without engagement, motivation would be low.

For any employee to be engaged in their work, there is a requirement for that work to be designed in a way that promotes engagement. The study shows that the job design of construction managers has tasks and boundaries that are clear and therefore supports employee engagement.

5.3. Recommendations

Areas for improvement have been identified in the results of the study and discussed under the employee engagement and job design constructs. Recommendations are generally associated with exploratory research, however the research questions in this study allow room for recommendations to be provided so that certain aspects of current situation in employee engagement levels, can be changed. Recommendations are set out for the employer and for the industry at large.

5.3.1 For the employer

Efforts to improve engagement levels can be directed in the following areas:

- Top Level commitment - Improving engagement may incur costs and require the dedication of the organisations leadership to drive the process.
- Workforce development planning – regular assessment of the workforce to identify opportunities for career development, performance evaluation and skills level benchmarking may prevent situations where employees are in the same position for over 3 years.
- Retain good workers – Implement HR practices that improve retention prospects.
- Training – should be planned to link between personal and career development goals

Occasionally collecting intelligence about how construction managers experience their work and trying to address any bottlenecks will support better business and boost project performance.

A well-integrated human resource management system, supported by good policy, practice and procedure will help deliver the stated benefits of engagement and improve the current levels. The following practices are recommended to support engagement and boost performance:

- Employee selection – a methodological process to hire individuals that fit with the organisation. These selected prospects should make the most valuable contributions to the organisation but also accomplish the desired impact on a team. The selection should be based on a job analysis to make sure the selection is job-related.
- Socialization – the process of internalizing the norms and ideologies of the organisation and should encompass both learning and teaching. This involves learning the company history, values, jargon, procedures and culture. Employees can learn the knowledge and skills necessary for them to assume their organisational role.
- Performance management – the process of ensuring that a set of activities and outputs meets an organisation's goals in an efficient and effective manner. The focus of performance management in relation to engagement should be at the employee level. Critical work activities as well as necessary skills and knowledge of construction managers is well defined and can be measured.

5.3.2 For the industry

For change to be catalysed in the construction industry a focus should be put on the following key drivers:

- **Committed leadership** - Executive and senior managers have great influence over the execution of any new strategies in an organisation. Their buy in and commitment to employee engagement and job design will drive the implementation process and create the necessary changes from the top down. Moreover, when leadership exhibits a commitment to core values, authenticity and integrity will improve trust amongst employee and result in improved engagement.
- **Customer focus** - A business strategy that incorporates a focus on customers has been found to increase customer base and customer retention, drawing

customers way from competitors. An organisation's customers are not only those that they do business with but also those that are employed by the organisation. A customer focus will require an organisation to have employees who work to create mutual engagement between customers and the organisation. And the organisation itself must work towards creating mutual engagement with employees. Customer focus is achieved through self-reflection and employees and the organisation must work to understand the wants, needs, and priorities of their customers. Engaged employees have will look for ways to improve the customer experience and the organisation will benefit.

- **Integrated processes and teams.** Industry success is due to various teams working to achieve project objectives. A group of members solve complex problems better than an individual due to the understanding if different aspects of a problem and then generation various options to solve the problem. It was established the construction managers spend most of their day at work and are influenced ad also influence their colleagues. Therefore, the development of teams with applicable disciplines to solve complex project problems will support positive engagement levels as team membership is cross functional but overall project objective is similar and work is challenging. The right construction manager with the right people doing the right work is a recipe for success and will result in greater contributions y team members with positive result for the organisation.
- **A quality driven agenda** - Quality management benefits an organisation on all levels of business. It ensures consistency in products and services. A quality driven business agenda focus supports customer focus. The products are delivered to customers in ways that create more value for them. Quality management also drives for employees to be trained and continuously improve. This supports engagement in that employees develop competence, are empowered and create to deliver value.
- **Commitment to people** - Helping employees realise their potential has both cost and benefit for any organisation. The cost lay in the development and training aspects, but the benefits lay in the increased motivation and willingness

of employees to go the extra mile. When employees feel supported and empowered, they show initiative and perform. Organisations that take care of their employees will experience lower staff turnover, lower levels of absenteeism, high productivity and a greater awareness on quality

Industry participants are called to value their workforce and understand how the industry is perceived by them. This understanding will give insight into specific employee concerns and ways to address them. Better management of the human capital can prove to be a source of competitive advantage.

5.4. Suggestions for future research

Based on the findings of the study, the limitations and the recommendations, the following are recommendations are laid out for future research:

- The study focused on a specific group of individuals within the construction contractor. Research including a larger population e.g. company-wide can produce different results and give insight into other departments.
- Research questions that obtain primary data which focuses on the direct link between engagement, job design and productivity can give insight into what the population understands to impact their experience of the concepts.

5.5. Limitations of the study

The construction industry is large with a vast number of contractors of various sizes and capacities. Construction managers lead construction projects and therefore play a significant role in overall project success which impacts competitive advantage.

This study was carried out in a single organisation. The organisation is considered one of the major construction contracting firms remaining in the KZN region. Engagement levels and job design were measured only at the construction management level and not across the whole organisation. As the study focused solely on construction managers, the engagement and job design results reflect only this group within the organisation. The positive association of engagement with productivity and the identification of critical work activities was established through the review of literature in respect of the construction manager.

Methodological limitations included physical access to participants. Construction managers work across different construction sites in the region. This required that data

collection be done using quantitative instruments sent and received electronically. Time in which to conclude the study was limited. This restricted the scale of the study and the window period in which to distribute surveys and collect of data was therefore only two months. This had an impact on the number or responses received. After the two-month window period, the data collected did not meet the census requirements. To overcome this, the researcher made direct contact with respondents and was able to acquire the required amount of responses.

5.6. Conclusion

This chapter concludes the study. Main findings from the study were outlined. Results show that construction managers were found to be engaged in their work and the design of their work reflected that existing work was well designed. Recommendations were made for the construction contractor and for the industry to improve employee engagement levels. Suggestions for future research were described and the limitations of the study discussed.

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Appendix 1

UKZN HUMANITIES AND SOCIAL SCIENCES RESEARCH ETHICS COMMITTEE (HSSREC)

Introduction and informed consent letter

Information Sheet and Consent to Participate in Research

Date:

Dear Sir/Madam,

My name is Nikita Bosa. I am a final year student in the Masters of Business Administration Programme from the Graduate School of Business and Leadership, University of KwaZulu Natal. My contact details are as follows:

Cell: [REDACTED]

Email: 206508472@stu.ukzn.ac.za.

You are being invited to consider participating in a study on the association between employee engagement, job design and productivity. The aim and purpose of this research is to identify where improvements in current levels of employee engagement and the perceptions on job design can positively impact on productivity of construction managers within a major construction contractor. The study is expected to enroll 11 participants from WBHO Construction, participants have been identified as construction managers in the KZN Division of the organization. It will involve the administration of a survey questionnaire. The duration of your participation if you choose to enroll and remain in the study is expected to be 10 (ten) to 15 (fifteen) minutes of your time.

The study will provide no direct benefits to participants. However we hope to better understand the association between improved employee engagement and increased productivity in the construction context.

This study has been ethically reviewed and approved by the UKZN Humanities and Social Sciences Research Ethics Committee (approval number HSSREC/00000326/2019).

In the event of any problems or concerns/questions you may contact me (the researcher) at Cell: [REDACTED] Email: 206508472@stu.ukzn.ac.za or the UKZN Humanities & Social Sciences Research Ethics Committee, contact details as follows:

HUMANITIES & SOCIAL SCIENCES RESEARCH ETHICS ADMINISTRATION
Research Office, Westville Campus
Govan Mbeki Building
Private Bag X 54001
Durban
4000
KwaZulu-Natal, SOUTH AFRICA
Tel: 27 31 2604557- Fax: 27 31 2604609

Email: HSSREC@ukzn.ac.za

Your participation in this project is voluntary. You may refuse to participate or withdraw from the study at any time with no negative consequence.

There will be no monetary gain from participating in this survey.

Should you decide to participate, all reasonable steps will be taken to protect your confidentiality and anonymity. This means that your personal information will not be disclosed to any other party other than myself (the researcher) or my supervisor. Any records identifying you as a participant will be maintained by the Graduate School of Business and Leadership, UKZN. A copy of your anonymised data will be stored in a secure cloud storage facility. A copy will also be maintained in electronic format by my supervisor. Electronic data will be stored for a minimum period of 5 (five) years and thereafter destroyed/deleted. Data stored on the cloud will remain and may be used for future research purposes such as publications related to this study.

CONSENT

I _____ (Name) have been informed about the study entitled Employee Engagement to Improve Productivity in the Management of Construction Projects by Nikita Bosa.

I understand the purpose and procedures of the study.

I have been given an opportunity to answer questions about the study and have had answers to my satisfaction.

I declare that my participation in this study is entirely voluntary and that I may withdraw at any time without affecting any of the benefits that I usually am entitled to.

If I have any further questions/concerns or queries related to the study I understand that I may contact the researcher at

Cell: _____

Email: 206508472@stu.ukzn.ac.za

If I have any questions or concerns about my rights as a study participant, or if I am concerned about an aspect of the study or the researchers then I may contact:

HUMANITIES & SOCIAL SCIENCES RESEARCH ETHICS ADMINISTRATION

Research Office, Westville Campus

Govan Mbeki Building

Private Bag X 54001

Durban

4000

KwaZulu-Natal, SOUTH AFRICA

Tel: 27 31 2604557 - Fax: 27 31 2604609

Email: HSSREC@ukzn.ac.za

Signature of Participant

Date

Appendix 2

Questionnaire schedule

Project Researcher: NNN. Bosa ([REDACTED])

Supervisor: Dr R. Sibanda (031-260 1479)

Research Office: Ms P Ximba (031-2603587)

September 2019

Dear Sir/Madame,

RE: SURVEY PARTICIPATION

You are invited to participate in a research project titled Employee Engagement to Improve Productivity in the Management of Construction Projects. The study aims to identify where improvements in employee engagement can positively impact on productivity of construction managers within a major construction contractor.

Through your participation I hope to understand the association between improved employee engagement and increased productivity in the construction context.

Your participation in this project is voluntary. You may refuse to participate or withdraw from the project at any time with no negative consequence. There will be no monetary gain from participating in this survey. Confidentiality and anonymity of records identifying you as a participant will be maintained by the Graduate School of Business and Leadership, UKZN. Your anonymised data will be kept and may be used for future research purposes such as publications related to this study.

If you have any questions or concerns about completing the questionnaire or about participating in this study, you may contact me or my supervisor at the numbers listed above.

The survey should take you about 15 minutes to complete. Your participation in this study is encouraged and it will be appreciated.

Please complete the questionnaire and return to:

Nikita Bosa

206508472@stu.ukzn.ac.za

Section A: Personnel Details

Please select the most appropriate description.

1. What is your current position?

Choose an item.

2. How long have you been in this current position?

Choose an item.

3. How long have you been in the construction industry?

Choose an item.

4. What is your gender?

Choose an item.

5. Please indicate your highest formal qualification/level of education?

Choose an item.

Section B: Employee Engagement

Please rate your experience with your current employer. Using the scale of 1 to 5, where "1" is the worst and "5" is the best. Drop down tab and select number.

Employee Satisfaction

Receiving recognition for a job	Rating
How close do you feel to people at work	Rating
How good do you feel about working at WBHO	Rating
How secure do you feel about your job	Rating
How much do you believe that the management is concerned about employees	Rating

Employee Identification

Proud to tell others about employment at WBHO	Rating
Feels a sense of ownership	Rating
Feels a sense of pride	Rating
Views the success of the WBHO brand as your own	Rating
Treats WBHO like family	Rating
Says "we" rather than "they"	Rating
Feels like it's a personal compliment when the brand is praised	Rating

Employee Commitment

Your commitment to deliver the WBHO brand promise increases along with knowledge of the WBHO brand	Rating
Very committed to delivering the WBHO brand promise	Rating
Feels like the WBHO has a great deal of personal meaning	Rating

Employee Loyalty

Content to spend the rest of your career in this organization	Rating
Do not have intention to change to another organization	Rating
Intention to stay is driven by competency in delivering the WBHO brand promise	Rating

Employee Performance

Your performance in the last appraisal exceeded expectations	Rating
You believe there is increased opportunity for improved performance in WBHO	Rating

Section C: Job Design

The questions in this section concern characteristics of the job itself. Using the scale of 1 to 5. Where "1" equals strongly disagree and "5" equals strongly agree please indicate the extent to which you agree with each statement. Remember to think only about your job itself, rather than your reactions to the job. Drop down tab and select number.

Autonomy

Work Scheduling Autonomy	
The job allows me to make my own decisions about how to schedule my work.	Rating
The job allows me to decide on the order in which things are done on the job.	Rating
The job allows me to plan how I do my work.	Rating
Decision-Making Autonomy	
The job gives me a chance to use my personal initiative or judgment in carrying out the work.	Rating
The job allows me to make a lot of decisions on my own.	Rating
The job provides me with significant autonomy in making decisions.	Rating
Methods Autonomy	

The job allows me to make decisions about what methods I use to complete my work.	Rating
The job gives me considerable opportunity for independence and freedom in how I do the work	Rating
The job allows me to decide on my own how to go about doing my work	Rating

Task Variety

The job involves a great deal of task variety	Rating
The job involves doing a number of different things.	Rating
The job requires the performance of a wide range of tasks.	Rating
The job involves performing a variety of tasks.	Rating

Task Significance

The results of my work are likely to significantly affect the lives of other people.	Rating
The job itself is very significant and important in the broader scheme of things	Rating
The job has a large impact on people outside the organization	Rating
The work performed on the job has a significant impact on people outside the organization.	Rating

Task Identity

The job involves completing a piece of work that has an obvious beginning and end.	Rating
The job is arranged so that I can do an entire piece of work from beginning to end	Rating
The job provides me the chance to completely finish the pieces of work I begin	Rating
The job allows me to complete work I start.	Rating

Feedback from Job

The work activities themselves provide direct and clear information about the effectiveness (e.g., quality and quantity) of my job performance.	Rating
The job itself provides feedback on my performance	Rating
The job itself provides me with information about my performance.	Rating

Job Complexity

The job requires that I only do one task or activity at a time	Rating
The tasks on the job are simple and uncomplicated	Rating
The job comprises relatively uncomplicated tasks	Rating
The job involves performing relatively simple tasks	Rating

Information and Processing

The job requires me to monitor a great deal of information.	Rating
The job requires that I engage in a large amount of thinking.	Rating
The job requires me to keep track of more than one thing at a time.	Rating
The job requires me to analyze a lot of information.	Rating

Problem Solving

The job involves solving problems that have no obvious correct answer.	Rating
The job requires me to be creative.	Rating
The job often involves dealing with problems that I have not met before.	Rating
The job requires unique ideas or solutions to problems.	Rating

Skill Variety

The job requires a variety of skills.	Rating
The job requires me to utilize a variety of different skills in order to complete the work.	Rating
The job requires me to use a number of complex or high-level skills.	Rating
The job requires the use of a number of skills.	Rating

Specialization

The job is highly specialized in terms of purpose, tasks, or activities.	Rating
The tools, procedures, materials, and so forth used on this job are highly specialized in terms of purpose	Rating
The job requires very specialized knowledge and skills.	Rating
The job requires a depth of knowledge and expertise.	Rating

Appendix 3

Gate keepers letter of consent



Construction KZN

A Division of WBHO Construction (Pty) Ltd

107 Chris Hani Rd (Old North Coast Rd), Glen Aml, 4051

P.O. Box 22428 Glenashley 4022, South Africa

Tel: +27 31 714 1500 Fax: +27 31 569 1272

(e) wbhokwaz@wbho.co.za (w) www.wbho.co.za

Reg No. 1983/011953/07

Dr Rosemary Sibanda
Graduate School of Business and Leadership,
University of KwaZulu- Natal
Westville
South Africa
3630

31 July 2019

Dear Dr Sibanda

**RE: PERMISSION TO CONDUCT RESEARCH AS PART OF THE MASTER
OF BUSINESS ADMINISTRATION QUALIFICATION**

This letter serves to confirm that I, Craig Jessop, Divisional Managing Director of WBHO Construction KZN, hereby acknowledge and approve the research of student, Miss NNNN Bosa – 206508472, within this division of the company, for the completion of her Master of Business Administration.

Please note that the financial status as well as the divulgence of company finances are strictly confidential and may not be mentioned in the study. Names of employees participating in the research are to remain confidential and the company name itself cannot be used but rather referred to as a "major construction contractor".

Please make available a copy of the research project prior to final submission/publication.

We look forward to being of assistance to your research student.

Regards,



Craig Jessop
Divisional Managing Director
WBHO Construction
KwaZulu-Natal
Tel: 031 714 1500

Directors:

E.L. Nel BSc (Eng)(Chief Executive Officer) • P.J. Foley BSc (Eng) • S.N. Gumede BA, LLB, LL.M (Wits) • C.V. Henwood CA(SA) • E.A. Mashishi BSc Eng (Mining) M. Eng • R.N. Smith Pr Eng, BSc (Eng)

Divisional Directors

C. Jessop BSc (QS) (Managing Director) • M.A. Boreham BSc (Const Man) • J. Naicker B Tech • S. Nigbin ND (Arch) • K. Ramiah BSc Prop Dev BSc (Hons) QS • G.J. Wichi CA(SA)

Alternate Directors

P. Naidoo • A. Syed

Appendix 4

Ethical clearance approval

28 September 2020

Ms Nikita Naledi Nakiyingi Nabossa Bosa (206508472)
Grad School Of Bus & Leadership
Westville Campus

Dear Miss Bosa,

Protocol reference number: HSSREC/00000326/2019

New Project title: Employee engagement to improve productivity in the management of construction projects.

Approval Notification – Amendment Application

This letter serves to notify you that your application and request for an amendment received on 21 September 2020 has now been approved as follows:

- Change in title

Any alterations to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form; Title of the Project, Location of the Study must be reviewed and approved through an amendment /modification prior to its implementation. In case you have further queries, please quote the above reference number.

PLEASE NOTE: Research data should be securely stored in the discipline/department for a period of 5 years.

All research conducted during the COVID-19 period must adhere to the national and UKZN guidelines.

Best wishes for the successful completion of your research protocol.

Yours faithfully








.....
Professor Dipane Hlalele (Chair)

/dd

Humanities & Social Sciences Research Ethics Committee
UKZN Research Ethics Office Westville Campus, Govan Mbeki Building
Postal Address: Private Bag X54001, Durban 4000
Tel: +27 31 260 8350 / 4557 / 3587

Website: <http://research.ukzn.ac.za/Research-Ethics/>

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INSPIRING GREATNESS

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