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THE IMPACT OF TRANSFORMATIONAL LEADERSHIP AND JOB CRAFTING ON FLOURISHING AT WORK AND IN-ROLE PERFORMANCE OF INFORMATION TECHNOLOGY PROFESSIONALS

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KEYWORDS

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In-role performance

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ABSTRACT

THE IMPACT OF TRANSFORMATIONAL LEADERSHIP AND JOB CRAFTING ON FLOURISHING AT WORK AND IN-ROLE PERFORMANCE OF INFORMATION TECHNOLOGY PROFESSIONALS

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The modern working environment is characterised by global competitiveness, digitisation, and a greater need to employ and retain the knowledge worker. With increased pressure to sustain a competitive advantage, organisations must shift management strategies and focus on fostering positive work outcomes to mitigate high turnover costs and enhance organisational effectiveness. In the South African environment, organisations are confronted with challenges such as skills shortages and high turnover, impacting the ability to attract, develop, and retain highly skilled Information Technology (IT) professionals.

The purpose of this research was to investigate the relationship between transformational leadership and job crafting on flourishing at work and in-role performance of IT professionals within the public sector and technology and e-commerce organisations in South Africa. The Job Demands-Resources (JD-R) model was utilised as a theoretical framework for the variables under investigation, enabling an understanding of how job resources impact positive work outcomes. Quantitative data were collected from IT professionals within the IT divisions of the public sector and technology and e-commerce organisations in South Africa (n = 164) through cross-sectional, ex-post-facto correlational research design, employing a non-probability, purposive sampling technique. Participation in the web-based survey was voluntary in nature, confidential, and anonymous. Valid and reliable measuring instruments were used to collect self-reported data, including the Transformational Leadership subscale of the Multifactor Leadership Questionnaire (MLQ-Form 5X-Short), the Job Crafting Scale (JCS), the Flourishing-at-Work Scale Short Form (FAWS-SF) and the In-role Behaviour Scale. Respondents were also asked to provide demographic and employment information.

Reliability analysis was conducted to assess whether the measuring instruments would produce the same results with repeated application and descriptive statistics were provided to outline the basic features of data. Multiple regression analysis was applied as a method of inferential

testing to accept or reject the study's research propositions. The study found that transformational leadership explained a significant proportion of the variance in increasing structural resources, increasing challenging job demands, and increasing social job resources but not decreasing challenging job demands. Furthermore, transformational leadership influenced IT professionals' flourishing at work and in-role performance. Similarly, job crafting explained variance in IT professionals' flourishing at work and in-role performance. Flourishing at work also explained a statistically significant proportion of the variance in in-role performance, however additional analysis indicated that only the psychological well-being dimension has a significant impact. The findings of this study could inform current management practices and assist in developing effective strategies to develop and retain highly skilled IT professionals. The study concluded with an outline of the limitations of the research and recommendations for future studies.

June 2020

DECLARATION

I declare that *The impact of transformational leadership and job crafting on flourishing at work and in-role performance of Information Technology professionals* is my own work, that it has not been submitted before for any degree or examination in any other university, and that all the sources I have used or quoted have, to the best of my knowledge, been indicated and acknowledged as complete references.

Kelly Cerfontyne June 2020

Signed: .....

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Chapter 1: Background to this study

1.1 Introduction

The 21st-century world of work is being defined increasingly as the age of the knowledge worker. An organisation's effective operation has progressively began to rely on its capacity to utilise information and technology for improved product and service delivery. Retaining and developing highly skilled and educated workers, such as Information Technology (IT) professionals, has become essential to attain business success (Fu & Chen, 2015; Reid, Riemenschneider, Allen, & Armstrong, 2008). Computers, software, networking, and other devices are used to manage information in the IT industry. Within the IT sector, essential support and resources are not always provided to professionals, who often are faced with the aggressive, highly repetitive and fast-paced nature of their work. In a climate focused on competition and fiscal gains, employees' well-being is often not prioritised, making highly skilled IT personnel a scarce commodity (Diedericks, 2012). IT employees are considered by many organisations as strategic assets because of their contribution to preserving corporate memory, project flow and the delivery of critical organisational systems (Mohlala, Goldman, & Goosen, 2012).

Leadership may be a significant element when addressing the issues currently facing the IT sector in general, and functioning of organisations in general (Thomas, 2015). Leadership can be defined as the intentional influence exerted by one individual over others to direct and structure activities (Yukl, 1999). Contemporary leadership plays a pivotal role in the way jobs are designed and altered by allowing employees to utilise opportunities for change as well as facilitating growth in difficult work environments (Avolio & Bass, 2004). Navigating challenging work conditions also requires employees to act proactively, thereby achieving an equilibrium between the features of their jobs and their own competencies and preferences (Kim, Im, & Qu, 2018; Tims, Bakker, & Derks, 2014). Employees' job crafting behaviour provides a mechanism that helps balance job demands and job resources, resulting in a wide range of positive outcomes such as employee well-being, meaningful work, person-job fit, commitment to work and job performance (Wang, 2017).

Within complex work environments, individuals flourish when the following job aspects are on a high level: job demands, job resources (e.g. supportive leadership), and personal resources (e.g. hope and resilience) (Bakker & Sanz-Vergel, 2013). The Job Demands-Resources (JD-R)

model demonstrates that job and personal resources enhance employees' well-being and performance in their roles. Thus, it is important that organisations strive to develop positive styles of leadership and encourage proactive work behaviours to promote employees' well-being, a high standard of individual performance, and thereby, the effective operation of the entire organisation.

1.2 Background to and motivation for the study

Organisations consider IT professionals as an indispensable, value-adding segment of the workforce, contributing to the successful functioning of business operations. The International Trade Administration (2019) notes that the Information and Communications Technology (ICT) sector is an increasingly significant contributor to South Africa's gross domestic product (GDP), and is among the most substantial ICT markets in Africa. According to McLoed (2018), the International Data Corporation (IDC) indicates that approximately 522 000 individuals are employed in the IT sector. Furthermore, 119 000 new job opportunities in the sector are expected to be created by 2023.

A growing body of research indicates that in the South African environment, these employees are challenged with significant work demands, extended working hours, and unworkable timelines – without the assistance of required resources (Messersmith, 2007). Rapid transformation, uncertainty in employment, and skills shortages present significant challenges to the South African workforce in general and the IT sector in particular (De Beer, Tims, & Bakker, 2016). Large employee-related expenses, functional challenges related to the nature of work, and limited tractability in applying new practices and strategies often result in high vacancy rates and inefficient operations (Diedericks, 2012; Thomas, 2015). The creation, maintenance and implementation of new technology are essential for GDP growth in South Africa and requires a diverse, highly skilled segment of workers. Such a workforce includes network specialists, business analysts, IT security specialists, and desktop support engineers (Roodt & Paterson, 2008; Schofield, 2016).

Thornhill (2014) specified that, in certain instances, organisations spend up to 60% of its operating budget on salaries and wages. Estimates obtained in 2014 show the immense impact of the IT sector on the South African economy, seeing that it contributes 2.7% (R93 billion) toward the country's GDP (Statistics South Africa, 2017). As organisations have increasingly began depending on the availability and performance of IT employees, management must

retain these staff as strategic resources (Mohlala et al., 2012). It is noted that the loss of key IT employees would be catastrophic, seeing that organisations use these professionals to devise, develop, support, and integrate systems within its business (Mohlala et al., 2012). Organisations, therefore, need to consider leadership strategies, employee mobility within the work environment, well-being, and the impact on performance deliverables.

The field of human resource management has traditionally emphasised job design, which serves as a thoroughly researched and practiced notion within organisations. Historically supervisors have been described as controlling job design; conversely, recent literature proposes that the employees actively change the design of their jobs by selecting tasks and assigning meaning to their work (Bakker, Tims, & Derks, 2012; Parker & Ohly, 2008; Wrzesniewski & Dutton, 2001). Furthermore, the Job Demands-Resources (JD-R) model advocates that job resources and personal resources can be used to buffer the negative effects of job demands in the work environment. Such resources allow employees to achieve an equilibrium between their job features and their personal competencies and preferences (Tims, Bakker, & Derks, 2013; Tims et al., 2014). Job crafting includes a wide range of positive outcomes for employees such as happiness, creativity, and commitment to work (Quinlan, Leach, & Robinson, 2014; Tims et al., 2014; Tims, Bakker, & Derks, 2015; Van Wingerden, Derks, & Bakker, 2017). Educated employees and knowledge workers such as IT professionals, craft their jobs in ways that are more resourceful, challenging and meaningful (Harju, Hakanen, & Schaufeli, 2016) when done under effective leadership strategies (Thomas, 2015).

Managers play a critical role in influencing employees' ability to craft their jobs by providing opportunities for flexible practices and sharing knowledge (Hetland et al., 2018). Transformational leadership entails a style in which a leader works with employees to recognise prospects for change, creates a vision to inspire subordinates, and shows consideration towards individual needs and growth (Avolio & Bass, 2004; Bass, 1999; Bass & Avolio, 1997). Moreover, transformational leadership's positive outcomes have been proven across research studies (Judge & Piccolo, 2004). These leaders inspire their subordinates to achieve beyond expectations and encourage them to find new ways of working (Breevaart, Bakker, Demerouti, & Derks, 2016). Considering the challenges IT professionals experience, it is crucial to leverage positive and engaging leadership strategies to elicit proactive work behaviour.

Research shows that outcomes such as flourishing at work and in-role performance, are important indicators of employee well-being and motivation (Bahmani, Muzafari, & Mowlaie, 2016). Essentially, individuals flourish when job demands, job resources (e.g. supportive leadership), and personal resources are high. The present study considers the realities within the IT sector and answers scholars' calls to focus on the variables of transformational leadership, job crafting, flourishing at work and in-role performance.

The main aim of the study was to gain an in-depth understanding of the impact of transformational leadership and job crafting on flourishing at work and in-role performance of IT professionals. Both the public and private sectors were included in the sample to be more representative of the IT sector. This knowledge contributes to the limited body of research on the variables under investigation within the South African context, and the IT sector particularly. It is essential for researchers and practitioners to understand the interplay between the antecedents and outcomes of job crafting, in addition to the role of leaders in impacting these relationships. The study aimed to help researchers and practitioners devise appropriate interventions and strategies to enhance employee well-being and performance on the job.

1.3 Research problem

Organisations utilising IT resources to meet critical business objectives are faced with several industry-specific issues. As a result, these organisations are unable to take full advantage of employees' skills and potential (Roodt & Paterson, 2008). For organisations, the difficulties in addressing challenges are apparent when devising practices and strategies outside the scope of traditional norms. Research studying the relationships between transformational leadership, job crafting, flourishing at work and in-role performance is relatively new within the context of South Africa and the IT sector. Generating knowledge on the antecedents and outcomes of job crafting may help organisations deal with the challenges these professionals face.

The research study was conducted with IT professionals in the public sector and technology and e-commerce organisations. These environments each pose unique challenges for employees due to the nature of the private and public sectors, respectively. The public sector is a particularly distinct environment as it operates according to structure and hierarchy (Department of National Treasury, 2011). In contrast, the IT division is particularly characterised by defined groupings according to skill-types (i.e. strategic, technical and service). In theory, the alignment of business strategy and IT divisions strategy is the main

reason for such a grouping structure, thereby allowing for efficient service delivery internally and externally.

Public entities aim to use IT for a wide range of deliverables, including public procurement, application management, cross-agency case management, Cloud computing, and advanced analytics. However, embedded and prescriptive governance issues, in addition to rigid structures in the organisations, hinder the effective use of IT resources. Such deficiencies lead to supervisory issues that may prevent employees from utilising resources to cope with job pressures (Reid et al., 2008). Private sector organisations have more freedom to implement interventions and make changes to operations; however, traditional ways of working continue to entrench similar problems faced by IT employees within this sector (Thomas, 2015).

Considering the global focus on the Fourth Industrial Revolution, the IT sector and its employees are essential across disciplines, economies and industries (Kneale, 2016). Advances in technology make the IT sector imperative to social and economic development in South Africa in particular, thereby making it paramount for South African organisations to retain highly skilled knowledge workers (Kneale, 2016). IT employees in the South African environment are currently faced with several issues such as rigid work environments, role ambiguity, large workloads and insufficient resources. Such issues have a negative effect on employees' well-being or their ability to flourish, over and above merely carrying out tasks to fulfil the requirements of their job. Consequently, organisations are experiencing high attrition rates of IT employees and high costs (Lambert, Hogan & Barton, 2001) in replacing these staff. The present research highlighted the need to address the retention of IT employees within the South African context to mitigate high turnover and the resultant financial impact on organisations.

It would benefit organisations to grasp the dynamics of variables such as leadership, flexibility, and adaptability in work roles (job crafting), employee well-being (flourishing at work) and in-role performance. Such understanding is important considering the current climate and challenges the broader industry faces.

Thus, the fundamental question that was addressed in the present study is as follows:

What is the impact of transformational leadership, as an antecedent of employee job crafting, on the flourishing-at-work levels and in-role performance of South African public sector and technology and e-commerce organisations?

1.4 Research objectives of this study

The main aim of the study was to explore the impact of transformational leadership and job crafting on flourishing at work and in-role performance among IT employees within South African organisations. This main aim was unpacked into the following specific objectives:

- To investigate the relationships between transformational leadership, job crafting, flourishing at work and in-role performance.
- To determine which of the dimensions of transformational leadership and job crafting impact flourishing at work and performance of professionals within the IT divisions of the public sector and technology and e-commerce organisations.
- Based on the findings, to provide suggestions to organisations on developing leadership and retention strategies for IT employees.

1.5 Limitations of the study

As mentioned above, the study aimed to highlight the effects that transformational leadership style, and employees' ability to craft their jobs, have on employee well-being and in-role performance. Nevertheless, a discussion of the limitations of the research is warranted.

Firstly, according to Bass (1999) and Garg and Ramjee (2013), studying transformational leadership as a single variable should be undertaken with caution, as the full range of leadership theory indicates that leaders may display a frequency of transformational and other forms of leadership behaviour. Secondly, Tims, Bakker and Derks (2012) caution that certain individuals may be more inclined to engage in job crafting behaviours due to their natural proactive inclination or personality traits. Thirdly, the use of self-reported questionnaires may cause individuals to respond in a socially desirable manner. Fourthly, the cross-sectional nature of the study is limiting as the stability of the variables of interest could not be studied over time. Finally, employing a non-probability sampling method limits the generalisability of results in different organisational settings.

Despite the above-mentioned limitations, the study intended to generate a more profound understanding of the impact of leadership and employees' job crafting behaviours on flourishing at work and in-role performance of IT professionals within the context of three South African organisations. Thus, organisations should focus on cultivating transformational leadership among managers. Such a leadership style would foster job crafting behaviour in

employees, improve employee well-being and, ultimately, enhance performance through interventions and training programmes.

1.6 Outline of the chapters

Chapter 1 of the research study outlined the main challenges IT professionals face within the public sector regarding technology and e-commerce organisations. Thereafter, a brief overview was provided of the relationships between transformational leadership, job crafting, flourishing at work and in-role performance. The motivation for the study was presented, in addition to the research problem, consequent research objectives, possible study limitations, and a conclusion.

Chapter 2 of the research study discusses a review of the literature, which provides the theoretical foundation for the study. The variables of interest are demarcated clearly, explicated, and discussed in relation to existing research. The relationships between transformational leadership, job crafting, flourishing at work and in-role performance are examined. Thereafter, a theoretical model provides a graphic depiction of the proposed relationships.

Chapter 3 explains the methodology used in the study. This includes a discussion of the research design and respondents, measuring instruments, and relevant ethical considerations adhered to during data collection. Finally, the chapter discusses the different statistical techniques utilised to analyse the research data.

Chapter 4 discusses the data analysis and findings from statistical tests that were used. This includes a reliability analysis of measuring instruments used in the study. Thereafter, descriptive statistics are presented in the form of central tendencies, to provide an overview of the composition of the research sample, including mean and standard deviation scores. Finally, inferential testing of the sample was conducted to either prove or disprove the study's research propositions. Regression analysis was done to model the relationships between independent and dependent variables and help understanding possible causal effects.

Chapter 5 provides a thorough interpretation of the propositions for the research, in addition to theoretical support for the research results demonstrated in the existing literature. The implications for future research and practice are discussed. Finally, potential limitations are pointed out and recommendations made for future research efforts.

1.7 Conclusion

The need for meaningful and relevant leadership practices and employee behaviour impacts organisations in South Africa and worldwide. This makes it a necessity to attract, retain, and develop scarce and critical skills for operational effectiveness. In South Africa, it is apparent that economic growth is partly dependent on the country's ability to leverage IT resources effectively (James, Esselaar, & Miller, 2001; Lumley, Coetzee, Tladinyane, & Ferreira, 2011).

Both transformational leadership and job crafting are considered as salient aspects of individual and organisational success. Organisations that invest in and develop transformational leaders and encourage flexibility and adaptability in job roles overcome typical issues experienced within the IT sector, for example (Fu & Chen, 2015; Messersmith, 2007).

Organisations need to create a shift in traditional leadership practices and rigid notions of job design to enable the use of job and personal resources, helping them achieve critical outcomes and performance objectives (Reid et al., 2008). This is particularly relevant for the IT segment of the workforce in South African organisations, as employees are confronted with daily challenges related to this landscape. The present research study sought to emphasise the positive impact of transformational leadership, individual job crafting behaviour, flourishing at work, and in-role performance.

Chapter 2: Literature review

2.1 Introduction

This chapter aims to conceptualise the theoretical constructs of transformational leadership, job crafting, flourishing at work, and in-role performance by a comprehensive review of academic research available on the topic. A synopsis of the definitions, theories, and core components of transformational leadership, job crafting, flourishing at work and in-role performance is also presented with reference to traditional and recent academic literature. The Job Demands-Resources (JD-R) model is also discussed to provide a theoretical framework within which to understand the study variables. Finally, the chapter examines the relationships between the variables under investigation.

2.2 Job Demands-Resources model

The Job Demands-Resources (JD-R) model is applied frequently to studies that seek to understand individual behaviour within the work context. According to Bakker and Demerouti (2007), the model is an extension of two popular psychosocial job-stress models: the job demands-control (JD-C) or demand-control-support (DCS) model (Johnson & Hall, 1988), and the effort-reward-imbalance (ERI) model (Siegrist, 1996). (See Figure 2.1 later for the Job Demands-Resources Model as taken from Bakker and Demerouti, 2014.)

The JD-R model also integrates two distinct processes: an energetic and motivational one (Demerouti & Bakker, 2011). The *energetic* process indicates a situation in which high job demands (e.g. workload) cause tension and lessen energy reserves, which can result in turnover and health issues. The *motivational* process, on the other hand, involves job resources such as feedback, supervisor support, and realising goals, which may enhance employees' motivation. Previous research indicates that job resources stimulate personal development and may have a buffering role when job demands are high (Bakker, Demerouti & Euwema, 2005). Later, Bakker (2011) expanded the JD-R model even further by indicating that job resources (e.g. supervisory coaching, autonomy, feedback on performance and social support) and personal resources (e.g. self-esteem, resilience, self-efficacy, and optimism), are linked strongly to work engagement. This is the case particularly when individuals are confronted with high job demands such as emotional and physical demands and work pressure (Bakker, 2008).

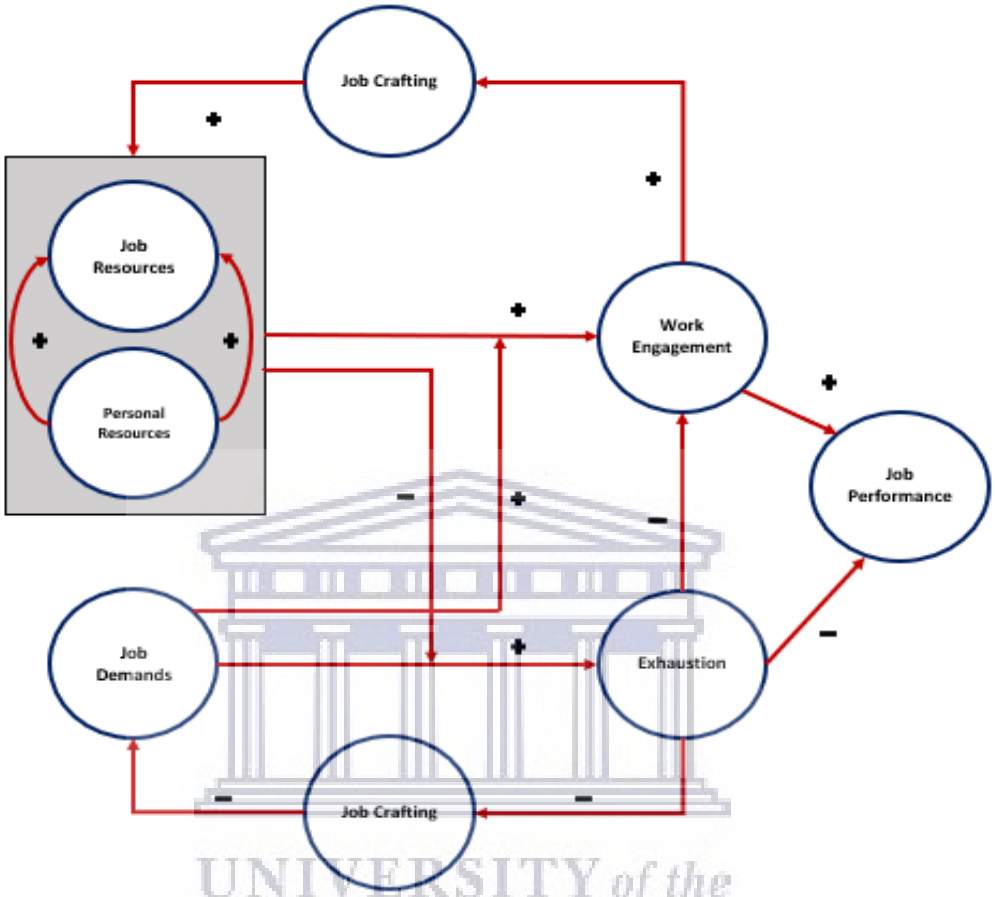
Previous research has made little to no attempt to integrate leadership into the JD-R framework, however, certain studies have used utilised aspects of the JD-R model to develop propositions centered on leadership and engagement (Schaufeli, 2015). Shaufeli (2015) was the first to combine leadership with the JD-R model by examining the overt and covert impact of leadership, through demands and resources, on work engagement and burnout. This finding was based on evidence that leadership has an important effect on subordinates' job demands and affective well-being (Skakon, Nielsen, Borg, & Guzman, 2010). Similarly, Perko, Kinnunen, Tolvanen and Feldt (2016) note that transformational leadership refers to constructive leadership characteristics that match the broad definition of job resources depicted in the JD-R model.

The present study built on this body of research by converging transformational leadership, job crafting, flourishing at work, and in-role performance of IT professionals with the JD-R framework. Placing job crafting within the JD-R model enhances the understanding of both the inhibiting and motivating elements that encourage employees to work (Gordon et al., 2018). Job demands, or inhibiting elements, and job resources, or motivating elements, entail the organisational, emotional, social, and psychological factors of the job that impact employees' well-being (Perko, Kinnunen, Tolvanen, & Feldt, 2016), going beyond task-level job attributes.

Furthermore, leadership can be defined as a resource impacting an individual's personal growth, propensity for learning and development, while fostering the achieving of work goals. When viewed as a job resource, supported by the motivational processes proposed by the JD-R model, transformational leadership motifies employees to craft the characteristics of their jobs, their flourishing at work leading to positive outcomes for the individual such as in-role performance, and for the organisation at large. The mentioned JD-R model is depicted in Figure 2.1.

Figure 2.1.

The Job Demands-Resources Model



Note. Adapted from "Job demands-resources theory" by A. B. Bakker and E. Demerouti, 2014. In C. Y. Chen, & C. L. Cooper, *Wellbeing: A complete reference guide, work and wellbeing*, p. 10. West Sussex, UK. John Wiley & Sons.

As mentioned previously, according to Schaufeli (2015), leadership has been framed as a job resource in terms of the JD-R model if the variable is included in the model at all. More specifically, support or supervisory coaching domains of leadership are included in certain studies, and only as a single latent construct, which makes it difficult to evaluate its impact fully. Nevertheless, Schaufeli (2015) argues that the role of leaders is to control followers' job demands and job resources to facilitate an environment in which followers are productive, healthy, and motivated. In this regard, leadership becomes an essential consideration. Transformational leaders, for example, help provide a favourable work environment for employees (Piccolo & Colquitt, 2006). In addition, such leaders encourage motivational processes that result in, for example, job crafting, flourishing at work, and in-role performance.

From the exposition above, it should be clear that the JD-R theory classifies job features as either demands, or resources. By using this conceptualisation, it captures a wide range of job characteristics that individual employees may change (Bakker et al., 2012). Furthermore, Tims, Bakker and Derks (2013) indicate that prolonged subjection to high job demands is related to reduced well-being. Bakker (2011) and Demerouti, Bakker, Nachreiner and Schaufeli (2001) note that the JD-R model explains job resources as motivational. Thus, it is expected that employees who expand their job resources experience increased levels of well-being (Tims, et al., 2013), or flourishing at work – as posited by the present study. The present research utilises the conceptualisation of job crafting introduced by Tims et al. (2012), according to which job crafting involves the adjustments employees make in their work to balance job demands and resources. This approach is grounded on the JD-R model (Bakker & Demerouti, 2008). Based on previous research, interventions centring on job redesign have been targeted at improving employee well-being by enhancing the balance between job demands and job resources.

As noted previously, the JD-R model can be employed to predict employee well-being and, similarly, performance at work (Demerouti & Bakker, 2011). A study by Demerouti et al. (2001) characterise job resources as the organisational features of work that are critical to obtaining work goals. According to Demerouti and Bakker (2011), studies have indicated continuously that employees show high levels of job performance in work environments that stretch them and resourcefulness. In this regard, the present study used the JD-R model as a framework but focused only on job resources and motivational outcomes, not job demands. The aim was to describe the variables under investigation, namely: transformational leadership, job crafting, flourishing at work and in-role performance.

2.3 Transformational leadership

Leadership style is an important factor to ensure an organisation's success. Researchers note that a transformational leadership style is an approach through which leaders motivate employees to identify with the goals of the organisation, their interests, and to flourish (Manzoor et al., 2019). Transformational leadership is essential since it has a critical role of bringing about changes that are prominent in effective management practices (Buil, Martínez, & Matute, 2019). It is important to understand transformational leadership according to leadership theory, in general, and the full range of leadership theory as explored subsequently.

2.3.1 Leadership theory

Leadership is generally regarded as essential for organisational growth (Nyengane, 2007), and has consequently been researched thoroughly in academic literature. For the present study, the term leadership refers to a process in which one individual exerts an intentional influence over others. The purpose is motivating, directing, structuring, and empowering others to ensure organisational goals are met (Aquino, 2013; Yukl, 1999). Thus, leadership can be considered essentially a dynamic interaction between a leader and a follower in a situation or environment (Hughes, Furnham, & Batey, 2013; Uusi-Kakkuri, 2017).

Previous research indicates that leadership has historically been distinguished in terms of two clear theories. The first class is trait theories, which are proposed by Galton and Eysenck (1896) and Gardner (1989). Trait theories can be described as the earliest approach to leadership in academia. While the theories have changed over time, its core principles remain prevalent within modern research and practice (Northouse, 2013). As part of this first class, behavioural theories, described by Blake and Mouton (1981) and Yukl, Gordon and Taber (2002) contrast several styles of leadership: participative against directive, autocratic against democratic, and people- against task-oriented (Bass, 1985; Bass & Riggio, 2006). It is apparent that contingency models and situational approaches have helped advance leadership theory by including context and evaluating the fit of a leadership style within a situation (Uusi-Kakkuri, 2017).

As a second class of theories, contemporary leadership approaches focus on the types of interaction between leaders and followers, in addition to the nature of the leader-follower relationship. As a forerunner for the second class of theories, the path-goal theory (Evans, 1970; House, 1996; House & Mitchell, 1975) was one of the first to consider employees' work duties, incentives and performance. Furthermore, the normative decision theory (Vroom & Yetton, 1973) argues that the most effective styles of leadership are contingent on the organisational situation and the groups' decision-making. The leader-member exchange (LMX) theory (Graen & Uhl-Bien, 1995; Graen & Cashman, 1975) and the full-range leadership theory (Bass, 1985; Bass & Avolio, 1991) extend the role of followers in their interaction with the leaders.

After the introduction of transactional and transformational leadership styles in House's (1977) theory of charismatic and visionary leaders, Burns's (1978) initial distinction between transformational and transactional leadership provided the foundation for the full range of

leadership theory. The early phase of Burns' theory development suggested that leaders either tend to engage in transacting with, or to transform those who follow them. The notion is that transactional leaders are interested in managing individuals, while transformational leaders are invested in driving change. Afterward, Bass (1985) advanced these ideas by proposing that transformational and transactional forms of behaviour work in unison to help attain an organisation's objectives.

2.3.2 The full-range leadership theory

Based on the above-mentioned notions, Bass and Avolio (2000) and Avolio and Bass (2004) developed and validated the full-range leadership theory, aiming for it to have practical value within organisations. Using this full-range theory as a tool, leaders should be able to recognise their leadership behaviours, pinpoint areas of strength and development, and advance their leadership capabilities (Avolio, 2005).

Theorists have positioned the full range theory within a continuum of leadership behaviours extending from passive (laissez-faire) to active leadership approaches (transactional and transformational). A large body of empirical research focusing on leadership has utilised the Multifactor Leadership Questionnaire (MLQ) and the Multifactor Leadership Questionnaire Form 5x (Bass, 1996; Bass & Avolio, 1991). Laissez-faire leadership refers to the leader relinquishing responsibilities to followers and side-stepping decision-making (Antonakis, Avolio, & Sivasubramaniam, 2003). Transactional leadership focuses on followers fulfilling expectations and receiving the associated rewards. In transactional leadership, accentuating discipline and meeting performance requirements, tend to limit the interactions between leaders and followers to a basic exchange relationship (Antonakis et al., 2003; Bass & Avolio, 1997). On the other hand, transformational leadership refers to a leaders' ability to encourage, motivate, and facilitate followers to achieve beyond expectations.

While the full-range leadership theory has become more popular over the years, criticism of the theory have been evident within literature. Furthermore, Anderson and Sun (2017) point out that the theory can be described as both universal and contingent. In addition, there are conceptual limitations regarding whether transformational leadership dimensions are the reason for or the content of transformational leadership. In essence, this limitation addresses whether the transformational leadership's effective execution can be explained in terms of

behaviours and skills, instead of outcomes of actions (Yukl, 2010). Literature also indicates that transformational leadership is considered as superior to other leadership behaviours in various situations. In essence this view posits the mentioned theory as universal, claiming that this is the best way to lead, regardless of the organisational context (Andersen, 2015).

The majority of factor studies concur with the distinction between the behaviour of transformational and transactional leadership (Bass, 1996), however, several inconsistencies have been pointed out. Research has found correlations above .70 for the two constructs (Andersen, 2015; Bass, Avolio, Jung, & Berson, 2003; Sušanj & Jakopec, 2012). Other researchers, however, have found lower correlations (Aarons, 2006; Bogler, 2001). Nevertheless, transformational leadership has been accepted generally as one of the most desired and effective styles of leadership since its inception and has since been used widely within leadership research (Anderson & Sun, 2017; Leong & Fischer, 2011; Piccolo & Colquitt, 2006; Van Dierendonck, Stam, Boersma, De Windt, & Alkema, 2014).

2.3.3 Dimensions of transformational leadership

The recognition a transformational leadership style has received in academic works is based on the assumption that such leaders can achieve superior results in numerous ways. These entail: acting as role models to their followers, inspiring trust, displaying a high level of integrity, demonstrating charisma, stimulating followers intellectually, considering followers' needs and motivating them (Bass, 1985; Geier, 2016). Various descriptions of the components of transformational leadership have been presented by academic researchers, emphasising emotion and values. The writings of Bass (1985), Bass and Steidlmeier (1999), Bennis and Nanus (1985), Posner and Kouzes (1988) and Rafferty and Griffin (2004) form part of this traditional perspective on transformational leadership (summarised in Table 2.1). Later theories emphasise emblematic behaviour and the leaders' role in creating meaningful events for followers. The present study, however, utilised Bass and Steidlmeier's (1999) version of transformational leadership, which has generated the most research among academic scholars.

Table 2.1

Summary of Transformational Leadership Dimensions from Early Studies

Bass (1985)	Bass & Steidlmeier (1999)	Posner & Kouzes (1988)	Bennis & Nanus (1985)	Rafferty & Griffin (2004)
Charisma Sub-factor: inspirational leadership	Idealised influence	Inspire a shared vision	Have a clear vision	Vision
Intellectual stimulation	Individualised consideration	Enable others to act	Create meaningfulness through communication	Personal recognition
	Intellectual stimulation	Challenge the process	Use creative deployment of self	Intellectual stimulation
	Inspirational motivation	Encourage the heart Model the way	Build trust	Inspirational communication Supportive leadership

Note. Adapted from "Transformational leadership and leading creativity," by P. Uusi-Kakkuri, (Doctoral dissertation), p. 13. University of Vaasa, Finland.

The defining aspect of transformational leadership is that it influences followers to achieve beyond what is expected of them (Breevaart, Bakker, Demerouti, Sleebos, & Maduro, 2014). Several scholars demonstrate that within the full-range leadership theory, transformational leadership is defined through the four I's, namely: idealised influence, inspirational motivation, individualised consideration and intellectual stimulation (Avolio & Bass, 2004; Bass, 1999; Breevaart et al., 2016; Kark, Shamir, & Chen, 2003; Wang, Demerouti, & Le Blanc, 2017; Zhu & Mu, 2016). Other authors argue that transformational leadership involves five first-order factors (Antonakis et al., 2003; Molero, Moriano, & Shaver, 2013). These factors include the four I's, but the scholars divide idealised influence into attributed and behavioural forms.

Idealised influence means leaders envision a desirable future and articulate how this vision can be reached. When transformational leaders' set an example and high standards of performance, ethics, and morals to be followed, followers are driven on these ideals (Bass, 1999; Zhu & Mu,

2016). Such leaders demonstrate charismatic qualities such as passion and enthusiasm, encourage commitment, act as a role model, and is perceived as such by their followers (Northouse, 2013). Additionally, transformational leaders pay attention to their followers' dreams and help them realise these dreams (Bass & Riggio, 2006; Northouse, 2013). Idealised influence embodies the uppermost level of transformational leadership, which is concerned with followers' perception of leaders as being confident, powerful, and focusing on higher-order ideals and ethics. Transformational leaders display authenticity, enabling followers to trust, admire, respect, and feel loyalty towards them (Garg & Ramjee, 2013; Vrba, 2007). Furthermore, idealised influence refers to the leaders' charismatic actions, particularly how they express values, beliefs, morals, and a sense of mission (Antonakis et al., 2003; Vrba, 2007).

Inspirational motivation, on the other hand, requires leaders to inspire, build confidence and stimulate enthusiasm by articulating goals and allowing followers to engage in meaningful and challenging work (Avolio & Bass, 1995; Wang et al., 2017; Zhu & Mu, 2016). Thus, followers gain a mutual appreciation of what is right and significant in the organisation. By inspirational motivation, transformational leaders effectively communicate expectations and motivate followers through emotional appeals, symbols, or any factor that, for example, boosts team spirit (Bass & Riggio, 2006; Northouse, 2013). Followers gain a heightened awareness of how their individual efforts contribute to the organisation's broader goals, thereby feeling that their actions add value to the company's success (Kark et al., 2003).

Individualised consideration entails leaders' ability to consider the followers' developmental needs, interests, and capacities. Transformational leaders should be involved in developing their followers through teaching, mentoring and coaching (Avolio & Bass, 1995; Wang et al., 2017). These leaders encourage communication and utilise active listening techniques, in addition to providing feedback around areas of development and strength (Bass & Riggio, 2006). Individualised consideration as a sub-dimension of transformational leadership, requires that leaders demonstrate flexibility to accommodate the diverse abilities and offerings of team members, support followers, and make their leadership inclusive (Kark et al., 2003; Kouzes & Posner, 2002).

Regarding intellectual stimulation, leaders are required to challenge followers' assumptions about knowledge, thereby stimulating creative new ideas and opinions through problem-

solving and active reasoning (Avolio & Bass, 1995; Wang et al., 2017). Transformational leaders motivate followers to use innovative methods that help them find solutions to problems. In addition, these leaders create an environment in which followers feel safe to take risks and defy the status quo (Kark et al., 2003). Leaders hold brainstorming meetings, focus on recognising and valuing individual input and encourage dialogue on challenging questions. Arnold and Loughlin (2013) point out that transformational leaders approach intellectual stimulation differently at the various levels within an organisation.

In summary, Garg and Ramjee (2013) explain that transformational leaders are characterised by three essential components:

- Increase followers' level of awareness about the possibility of attaining meaningful and valued outcomes, a vision, and the necessary strategy.
- Motivate individuals to reach beyond their own self-interests to the success of the team or the broader organisation.
- Increase followers' capabilities and range of needs by creating awareness to help individuals grow and realise their goals fully.

2.3.4 Transformational leaders' impact on followers and organisations

Organisations aim to optimise leadership practices, thereby maximising organisational outcomes. Therefore, transformational leadership becomes particularly important to consider. Research shows that transformational leadership is concerned with subjective (employee opinions) and objective (business profits) measures to help reach the organisation's goals and overall efficiency. A study by Limsila and Ogunlana (2007) indicated that a transformational leadership style yields the most positive outcomes. Zhu (2013) points out that transformational leadership, compared to other styles, guides followers to operate more effectively. Similarly, Hautala (2005) demonstrates that transformational leadership resulted in greater efficiency and stronger results in organisations, with recent studies supporting these findings (e.g. Noruzy, Dalfard, Azhdari, Nazari-Shirkouhi, & Rezazadeh, 2013; Wang, Oh, Courtright, & Colbert, 2011). Avolio and Yammarino (2013) found that transformational leaders encourage higher levels of employees' commitment to the organisation.

Transformational leaders influence their followers' outcomes in several ways. Breevaart, Bakker, Demerouti and Derks (2015) suggest that transformational leadership is related to a range of positive outcomes. According to Breevaart et al. (2015), prior literature examining the outcomes of transformational leadership has focused predominantly on three desired work outcomes: creativity in employees (Malloch, 2014, Mittal & Dhar, 2015), employees' innovative work behaviour and innovation performance (Afsar, Masood, & Umrani, 2019; Zhu & Mu, 2016), and employees' performance within their jobs and the organisation at large (Aryee, Walumbwa, Seidu, & Otaye, 2011; Kovjanic, Schuh, & Jonas, 2013).

Numerous studies have indicated that transformational leadership is associated positively with other important outcomes. Under a transformational leader, it is argued that followers are more satisfied, engaged and demonstrate higher levels of optimism and performance (Avolio & Bass, 2004; Bass, 1998; Lowe, Kroeck, & Sivasubramaniam, 1996). These outcomes are reached through a sharing leadership style and by building strong relationships with the employees (Breevaart, Bakker, Demerouti, & Van Den Heuvel, 2015). Smircich and Morgan (1982) argue that transformational leaders are essential by forming and defining the work environment. Furthermore, these leaders have a direct impact on followers' social environments on which they rely for judgements in their daily work setting. Arnold, Turner, Barling, Kelloway and McKee (2007) as well as Nielsen, Yarker, Brenner, Randall and Borg (2008) indicate that transformational leaders are also instrumental in providing meaning for the work their followers perform on an everyday basis.

2.3.5 Antecedents and qualities of transformational leaders

Bass (1985) found that transformational leaders have high self-confidence, are active and energetic, self-starting, introspective and thoughtful. Transformational leadership is also shown to be linked positively to personality traits such as extroversion, dominance, self-confidence, openness to experience, hardiness, physical fitness, high moral reasoning, feeling and femininity (Bass & Riggio, 2006). The antecedents of transformational leadership may involve environmental conditions, organisational structures, cultural and social environments, and early life and childhood experiences (Bass & Riggio 2006; Bommer, Rubin, & Baldwin 2004; Shamir & Howell 1999).

2.3.6 Training to increase transformational behaviours

Training interventions can be utilised to develop behaviour patterns of transformational leadership. Chaimongkonrojna and Steane (2015) and Uusi-Kakkuri (2017) propose that counselling based on follower feedback and group-based leadership training can be employed to increase transformational leadership behaviours. Interventions should be relevant and undertaken with caution, to avoid negative outcomes. Mason, Griffin and Parker (2014) demonstrate that respondents who had undergone training reported increased levels of transformational leadership only when they experienced positive emotions, self-knowledge, the ideal self and personal vision. Additionally, academic literature indicates that intellectual stimulation is an appropriate component of transformational leadership to develop within training interventions as it is relatively easy to train (Barling, Weber, & Kelloway, 1996; Uusi-Kakkuri, 2017). Peng et al. (2016) suggest that developing communication, for example, would be an efficient method to enhance leaders' intellectual stimulation, as is evident in meetings, speeches and conversations. Organisations and practitioners must use the correct approach in developing communication to provide successful intellectual stimulation (Bass, 1985).

2.3.7 The integration of leadership into the Job Demands-Resources model

To date, limited research has attempted to integrate leadership into the JD-R model. In this regard, Schaufeli (2015) points out that leadership has been incorporated into the JD-R model only as a job resource, if at all. More specifically, certain aspects of leadership, such as supervisory coaching and support have been deemed relevant to the model. Schaufeli (2015) remarks that studying the impact of leadership is critical. The reason is that leaders have the role of balancing their followers' job demands and job resources to ensure they remain healthy, motivated and productive. Leaders achieve these outcomes by managing the allocation of job demands and job resources and its impact on their employees (Breevaart et al., 2014; Schaufeli, 2015).

Inspiring leaders provide their followers with organisational resources by emphasising alignment, value congruence, trust and justice, and minimising their organisational demands. Such positive outcomes are reached by circumventing bureaucracy and managing organisational change adequately. These leaders also provide followers with work resources (e.g. job control, use of skills and task variety) and development resources (e.g. performance feedback and career perspective). Leaders also monitor followers' qualitative and quantitative

job demands, work overload, emotional demands and the work-home interface. Furthermore, the leaders provide social resources such as a conducive team atmosphere and individual role clarity. Several studies have used this line of reasoning to understand leadership from within the context of the JD-R framework (Breevaart et al., 2014; Schaufeli, 2015).

2.3.8 Transformational leadership in South African organisations

According to Vrba (2007), research determining talent with the potential to develop into transformational leaders is key within the South African context. Organisations in South Africa face a unique socio-economic reality in which organisations must transform rapidly, attain a staff complement from previously disadvantaged groups and groom employees into efficacious leaders. Bass and Avolio (1997, p. 20) comment on the need for transformational leadership in South Africa: "There are perhaps few other places in the world where transformational leadership is so much required, and the benefits are so enormous and visible." In this regard, South African organisations require transformational leadership to lead them through the changes brought about by unique post-apartheid challenges that affect the business environment. Transformational leaders can lead followers under conditions of ambiguity and high-risk taking, making them the ideal change agents within the workplace.

Leadership, particularly the transformational style, can be described as prominent within the current digital era. The reason is that leaders must be capable to cope with fast-paced change within industry and be able to execute strategic plans. A growing body of literature in the South African context emphasises the specific challenges employees face within the IT industry. Among these challenges are a large workload, extended working hours and impractical deadlines, often lacking the required resources to operate successfully within this challenging environment (Diedericks & Rothmann, 2014; Messersmith, 2007). Moreover, the IT industry in South Africa faces high levels of skill shortages. Hickman and Akdere (2018) argue that the IT sector is important due to the industries it creates and disrupts and the potential growth impact on organisations. Therefore, emergent and transformational leadership is essential for the IT sector's sustainability.

According to the traditional view, transformational leadership is essential for top-level management, however, it is argued that this form of leadership is critical at all levels of management within various contexts. This includes industrial, educational, government and

military settings. If the country is to remain a significant player in the global marketplace, it is imperative to identify and develop transformational leadership at all levels, particularly within the IT sector, thereby providing significant and positive impacts on both individuals and organisations (Buil, Martínez, & Matute, 2019; Vrba, 2007).

2.4 Job crafting

According to Rudolph, Katz, Lavigne and Zacher (2017), job crafting is different from taking personal initiative and assuming responsibility for tasks, as the latter behaviours have a broader application. Job crafting, as proactive behaviour, means changing the perceived characteristics of work to fit employees' needs and expectations. These changes either lessen or alter job demands and increase the resources necessary to deal with these demands (Villajos, García-Ael, & Topa, 2019).

Bell and Njoli (2016), Tims et al. (2013) as well as Tims, Bakker and Derks (2015) identify three main reasons why employees craft their jobs:

1) Employees change the design of work tasks to experience higher levels of job satisfaction. In this sense, they seek from their managers alternative tasks that require additional competencies, seeing that these employees perceive their work as monotonous and tedious (Tims et al., 2015).

2) Individual employees may feel the need to adjust the interpersonal relationships they establish while performing their jobs.

3) Employees may shift cognitive perceptions of their work tasks, altering these into positive perceptions of their job attributes.

2.4.1 Two perspectives on job crafting

The way jobs, tasks and roles are structured, enacted and modified is essential for outcomes from individuals, groups, and organisations in the current changing and complex organisational environments (Grant & Parker, 2009). Job crafting is not regarded as an ongoing process and for it to take place, employees must consult their managers (Wrzesniewski & Dutton, 2001). Therefore, job crafting can be regarded as an employee-driven approach in which individuals do more than simply enact their assigned roles (Tims, Bakker & Derks, 2012).

In 2001, Wrzesniewski and Dutton first introduced the concept of job crafting. These scholars define job crafting as "the physical and cognitive changes individuals make in the task or relational boundaries of their work" (2001, p.179). Job crafting is a multi-dimensional concept explaining how employees shape and redesign their jobs by altering three specific features: physical task boundaries, cognitive task boundaries, and relational boundaries. Changing physical task boundaries means altering the form or number of activities in which employees are involved in their work, for example, intensifying or lessening the scope of tasks or changing the way tasks are performed. Altering cognitive task boundaries implies changing the way individuals envision their job. This includes how individuals understand or conceptualise their job tasks in terms of the full picture rather than a distinct set of tasks. Finally, employees alter relational boundaries, by making decisions about social interactions whilst performing the job (Berg, Wrzesniewski & Dutton, 2010; Tims et al., 2012; Wrzesniewski & Dutton, 2001). Wrzesniewski and Dutton (2001) suggest that individuals craft their jobs to gain control over it, generate a positive self-image, and establish healthy relationships with others.

Researchers explain job crafting as a form of individual proactive behaviour (Petrou, Demerouti, Peeters, Schaufeli & Hetland, 2012). Thus, job crafting can be described as a self-initiated, bottom-up approach to work design (Peeters, De Jonge, & Taris, 2013). In 2012, Tims et al. offered a different perspective by defining job crafting as the self-initiated process whereby employees proactively alter their job attributes to achieve an equilibrium between their job features, and their competencies and preferences. Following this line of thinking, Tims et al. (2012) differentiate between four job crafting dimensions, thereby improving on the three different forms posited by Wrzesniewski and Dutton (2001), which they felt were limiting. Therefore, Tims et al. (2012) framed their definition within the JD-R model. The present study follows the framework of job crafting presented by the latter three scholars, concurring that there are additional ways to craft jobs other than the activities described in Wrzesniewski and Dutton's (2001) definition. Table 2.2 below compares the two perspectives on job crafting.

Table 2.2

Comparing the Two Perspectives on Job Crafting

Job crafting perspectives	Definition	Purpose and motivation	Target	Types
Wrzesniewski & Dutton (2001)	'the physical and cognitive changes individuals make in the task or relational boundaries of work' (2001, p. 179)	• Assert control • Create a positive self-image • Connect to others • Increase meaning at work	• Task boundaries • Relational boundaries • Cognitive boundaries	• Task crafting • Relational crafting • Cognitive crafting
Job Demands-Resources Model (Tims Bakker & Derks, 2012)	'the changes that employees make to balance their job demands and job resources with their personal abilities and needs' (2012, p. 174)	• Improve person-job fit • Enhance work engagement • Avoid health impairment	• Job demands • Job resources	• Increasing structural job resources • Increasing social job resources • Increasing challenging job demands • Decreasing hindering job demands

Note. Task crafting can be seen as changing job demands. Relational crafting can be seen as changing job resources. Adapted from "How can I shape my job to suit me better? Job crafting for sustainable employees and organizations," by P. M. Le Blanc, E. Demerouti and A. B. Bakker, 2017, *An Introduction To Work and Organizational Psychology: An International Perspective, 3*, p. 53.

2.4.2 Distinguishing job crafting from job design

Organisations find it challenging to produce optimal job designs for employees, making alternative methods of designing jobs to consider individuals' unique experiences, intentions

and preferences (Peeters, De Jonge, & Taris, 2013). Recent research depicts job crafting as a bottom-up process, as opposed to the top-down one that was initially conceptualised in job design theory (Bell & Njoli, 2016). In the traditional sense, job design signifies a top-down movement where supervisors bear the responsibility for organising and adjusting individuals' jobs (Grant & Parker, 2009). This approach to job design was critiqued in academic literature for not considering the continuous changes occurring in work settings and the increasing complexity of jobs (Koning, 2014). According to Peeters, De Jonge and Taris (2013), flexible work arrangements, virtual teams and telework and self-managing teams demonstrate the intricacies apparent in the current world of work.

Grant and Parker (2009) propose that organisational leadership take a different approach to job design by focusing on job flexibility instead of rigid and static jobs. Adopting more dynamic and multifaceted approaches to job design, such as job crafting, allows employees the freedom to develop themselves and respond to opportunities and demands within the work context (Schaufeli, 2013). Academic scholars agree that individuals should participate and play a role in shaping their work environments to a greater extent than in the past (Grant & Parker, 2009).

2.4.3 Dimensions of job crafting

A large body of research proposes that job crafters proactively alter aspects of their job, using four dimensions that are in line with JD-R theory, which characterises every job in terms of demands and resources (De Beer et al., 2016; Tims et al., 2012). The four dimensions are: increasing structural job resources, increasing social job resources, increasing challenging job demands and decreasing hindering job demands.

2.4.3.1 Increasing structural job resources

Increasing structural job resources means increased opportunities for development from various sources, heightened responsibility and autonomy (Bell & Njoli, 2016; Tims et al., 2012). Structural job resources entail individual employees gaining responsibility and/or job knowledge or skills. When employees attempt to craft structural resources, they may consider specific training. Individuals steer themselves in a direction and therefore seek training and learning opportunities to develop or acquire job-related knowledge (Oudkerk Pool, 2016). This action describes crafting as individual employees seeking training of their own accord. In this

regard, structural job resources mean gaining job-related knowledge, increasing responsibility for tasks and developing new work processes and novel skills. Thus, a larger impact on job design is apparent. In the IT sector, employees may increase structural resources by broadening their knowledge by, for example, learning about emerging concepts in the field such as Cloud computing and data science (McLoed, n.d.).

2.4.3.2 Increasing social job resources

Social job resources refer to the social components of work and reaching appropriate levels of interactions with others in the workplace. Increasing social job resources implies, for example, increased social support, feedback, and supervisor coaching (Bell & Njoli, 2016; Schaufeli & Bakker, 2004; Tims et al., 2012). For social aspects of the job, feedback and coaching through supervisors are paramount, while social support is necessary to reach suitable interaction (Tims et al., 2012). Employees can craft social job resources in especially two ways: request coaching from managers, or eliciting feedback from co-workers (Oudkerk Pool, 2016). Depending on individual preferences, employees will increase or decrease levels of interaction to meet their needs. To enhance social job resources, IT employees may seek advice from colleagues on critical and complex projects or request one-on-one meetings with direct supervisors to receive feedback on their performance.

2.4.3.3 Increasing challenging job demands

By increasing challenging job demands, employees develop capabilities to achieve difficult goals for enhanced personal growth and satisfaction with the job (Bell & Njoli, 2016; Rich, Lepine, & Crawford, 2010; Tims et al., 2012). Challenging job demands can be crafted by increasing skills or knowledge, searching proactively for opportunities and being open to novel developments, to reach more difficult goals (LePine et al., 2005). Examples of challenging job demands are higher workloads and tight deadlines (Koning, 2014; Tims et al., 2012). By pursuing certain opportunities, individuals can direct their jobs in a manner that suits them the best. Employees, for example, can also increase challenging job demands by embracing or rejecting new technology, getting involved in new projects and taking on additional tasks such as volunteering to test new tools and applications. Such increasing demands may lead to greater levels of personal growth, self-efficacy and job satisfaction (Berg, Dutton, & Wrzesniewski, 2008). For IT workers, to increase challenging job demands could include assuming leading

positions for projects or applying concepts related to the Fourth Industrial Revolution in their work, such as artificial intelligence, robotics and 3D printing.

2.4.3.4 Decreasing hindering job demands

Decreasing hindering job demands refers to instances where employees proactively lower job demands they perceive as overwhelming (Bell & Njoli, 2016; Tims et al., 2012). These types of job demands are taxing on employees and limit personal growth, learning and goal attainment. When individuals are confronted with elevated demands while job resources are limited, there is increased possibility of adverse health and organisational outcomes. If individuals can reduce job demands, the risk of negative consequences will decrease. Examples of hindering job demands are psychological demands, burnout, work conflict, role ambiguity and turnover (Tims et al., 2012). When IT employees are faced with high job demands, they may seek clarity on their role from management to reduce ambiguity, schedule leave to reduce burnout, or resign from a job to pursue a work environment that they perceive as less stressful.

Oudkerk Pool (2016) indicates that job demands can be categorised into mental and emotional ones. *Mental* demands entail utilising knowledge and be changed by reorganising the workload or reducing interactions with individuals who have impractical expectations. On the other hand, *emotional* demands involve dealing with individuals and can be lessened by managing interactions with other employees who can impact the individual's emotional condition.

2.4.4 Outcomes of job crafting

Academic literature has indicated that job crafting can promote a wide range of positive outcomes for both employees and organisations. Individuals can modify their job tasks to suit their preferences and create a better fit between these preferences and success in their jobs (Tims & Bakker, 2010). Berg, Dutton and Wrzesniewski (2007) as well as Tims et al. (2013) point out that job crafting makes employees perceive their work more meaningful, in addition to improving their work identity. Scholars also found that job crafting leads to important individual outcomes such as job satisfaction, work engagement, high levels of performance and thriving at work (Berg et al., 2007; Fuller Jr & Marler, 2009; Petrou et al., 2012; Tims et al., 2013). Numerous researchers indicate that job crafting promotes individual happiness and motivation, as well as enhances creativity, innovation and career success, thereby leading to

higher levels of commitment to the job (Hetland et al., 2018; Petrou et al., 2012; Quinlan et al., 2014; Tims et al., 2014; Tims et al., 2015; Van Wingerden et al., 2017). Other researchers concur with these findings and add that job crafting provides benefits to organisations such as higher levels of job performance (Tornal & Frese, 2013), increasing employee commitment to the organisation, and reducing turnover intentions (Tims & Bakker, 2010).

2.5 Flourishing at work

According to Keyes, Hysom and Lupo (2000) and Seligman (2011), for-profit organisations tend to approach striving for success by mitigating liabilities, ineptitudes, sources of tension and dissatisfaction among workers and customers. The scholars argue that organisations must follow a positive approach whereby higher levels of employee well-being are promoted, and leaders are provided with legitimate authority. Howell (2009) and Van Zyl and Rothmann (2012) point out that researchers and practitioners have long since been captivated by subjective judgements of individual well-being and happiness. An emerging body of literature proposes that employees' flourishing at work, or subjective well-being, originated within the context of mental health. In recent literature, a shift toward flourishing at work has become more popular, whereas previous studies have not paid much attention to sound mental health (Diedericks & Rothmann,2013; Howell, 2009; Rautenbach, 2015).

According to Redelinghuys, Rothmann and Botha (2018), the alarming state of mental health within the workplace has been reported by several national (Diedericks & Rothmann, 2014; Khumalo, Temane, & Wissing, 2012; Swart & Rothmann, 2012) and international studies (Keyes, 2002; Keyes, Dhingra, & Simoes, 2010). It is therefore essential for researchers and practitioners to examine the elements associated with flourishing at work such as employees' performance (Redelinghuys, 2016).

Flourishing at work can be described as a form of high-level individual well-being and optimal human functioning regardless of context (Diener et al., 2010). Such flourishing also involves considering the well-being of others beyond the work environment. Individuals who achieve a high level of flourishing at work eliminate conditions that impede work-life balance (Bakker & Sanz-Vergel, 2013). Furthermore, in terms of flourishing, individual well-being has been conceptualised within a continuum. Thus, individual employees are depicted as follows: flourishing at work as described above; being moderately mentally healthy (i.e. neither

flourishing at work nor languishing); or languishing by experiencing low levels of psychological, emotional or social well-being (Booth, 2013; Van Zyl & Rothmann, 2012). Flourishing at work describes individual employees' preferred state of well-being, which they attain through positive experiences and the effective organising of factors related to their job (Rautenbach, 2015).

The concept of flourishing at work is based largely on early humanistic psychological theories (Ryan & Deci, 2000; Ryff, 1989; Ryff & Singer, 1998), which explore several universal psychological needs such as those for competence, relatedness and self-acceptance (Diener et al., 2010). Helliwell, Barrington-Leigh, Harris and Huang (2009) and Putnam (2000) offer a different approach to well-being, stating that social capital lies at the foundation of societal well-being. Csikszentmihalyi (1990) discusses flow, interest, and engagement as essential to human well-being, which is the basis of psychological capital. Additionally, Seligman (2002) and Steger, Kashdan, Sullivan, and Lorentz (2008) present arguments and data supporting the idea that purpose and meaning are beneficial to human functioning. Five prominent conceptualisations of flourishing at work are presented in academic literature (Diener et al., 2010; Huppert & So, 2013; Keyes, 2002; Noble & McGrath, 2015; Seligman, 2011). Rothmann (2013) expanded on the study of Keyes (2002, 2005) regarding the work context and the present study followed this line of reasoning. The above-mentioned conceptualisations of flourishing are outlined in Table 2.3.

Table 2.3

Five Conceptualisations of Flourishing

Keyes	Diener et al.	Seligman	Huppert and So	Noble and McGrath
Positive Relationships	Positive Relationships	Positive Relationships	Positive Relationships	Relationships
Positive affect	Engagement	Engagement	Engagement	Engagement
Purpose in life	Purpose and meaning	Meaning and purpose	Meaning and purpose	Purpose
Self-acceptance	Self-acceptance and	Positive emotion	Self-esteem	Positivity
Positive affect	Self-esteem	Accomplishment	Positive emotion	Outcomes
Social contribution	Competence		Competence	Resilience
Social integration	Optimism		Optimism	Strengths
Social actualisation	Social contribution		Emotional Stability	
Social acceptance			Vitality	
Social coherence			Resilience	
Environmental mastery				
Personal growth				
Autonomy				
Life satisfaction				

Note. Adapted from "Person-environment fit, flourishing and intention to leave in universities of technology in South Africa," by C. Janse van Rensburg, S. I. Rothmann and E. Diedericks, 2017, *South Africa Journal of Industrial Psychology, 43*(1), p. 2.

2.5.1 Flourishing at work in the context of the JD-R model

Bakker and Sanz-Vergel (2013) point out that job demands and job resources are essential for flourishing at work. In this context, the JD-R model indicates that the interaction between job demands, job resources and personal resources is essential for flourishing at work to occur (Bakker & Sanz-Vergel, 2013). For example, job demands, such as work overload, can either facilitate or hinder the positive impact of personal resources, such as social support, on flourishing at work (Bakker & Demerouti, 2013). In the present study, the JD-R model was used as a theoretical framework to understand flourishing at work. Furthermore, self-determination theory (SDT) is assumed as a conceptual framework for flourishing at work,

seeing that it is centred on the positivity of individuals' experiences based on their basic psychological needs (Deci & Ryan, 2008).

2.5.2 Subjective well-being

Subjective well-being refers to individuals' perceptions and appraisals of the quality of their lives and their psychological and social functioning (Keyes, Hysom & Lupo, 2000). In this regard, subjective well-being is multi-factorial, comprising emotional well-being (e.g. happiness), psychological well-being (e.g. personal growth) and social well-being (e.g. social contribution) (Keyes et al., 2000). According to Rautenbach (2015), subjective well-being incorporates both hedonic and eudemonic states of well-being. This means that individuals feel good and function effectively (Rautenbach, 2015).

2.5.2.1 Emotional well-being

Individuals' emotional well-being entails experiencing life satisfaction, positive emotions and low negative affect (Diedericks, 2012; Van Zyl & Rothmann, 2012). More specifically, emotional well-being involves the assessment of one's contentment and satisfaction with life, in addition to balancing positive and negative affect (Keyes et al, 2000). If individuals feel more positive than negative emotions over time, they are described as emotionally well.

2.5.2.2 Psychological well-being

Psychological well-being includes positive self-evaluations of individuals' achievements as well as feeling a sense of satisfaction with these achievements. Such well-being includes showing insight into development, finding purpose and being open to new experiences (Diedericks, 2012; Van Zyl & Rothmann, 2012). Psychological well-being involves a combination of six elements to determine the extent to which individuals are dealing well with existential challenges in life. These elements are: personal acceptance, positive relations with others, personal growth, purpose in life, environmental mastery and autonomy (Keyes et al., 2000).

2.5.2.3 Social well-being

Individuals' social well-being includes the belief that they are contributing constructively to a larger system, are concerned with the quality of their relationship with others, and recognises potential and growth in others (Diedericks, 2012; Van Zyl & Rothmann, 2012). This aspect of flourishing at work involves the degree to which individuals are functioning well within their social lives, for example, towards their colleagues. When people are socially healthy, they perceive the world as predictable, meaningful and full of potential that is being developed. Individuals thrive when they are part of a larger group from which they gain comfort, accept other people and perceive that their contributions are valued by other individuals (Keyes et al., 2000). The five elements of social well-being are coherence, actualisation, integration, acceptance and contribution. The three dimensions of mental health as flourishing are presented in Table 2.4.

Table 2.4

Dimensions and Factors Reflecting Mental Health as Flourishing

Dimension	Definition
	Emotional well-being (positive emotions/feelings)
Positive affect	Energetic, regularly cheerful, serene, good-spirited
Affirmed quality of life	Showing general satisfaction and happiness with life overall
	Psychological well-being (positive psychological functioning)
Self-acceptance	Positive attitudes toward self/own personality
Personal growth	Ambitious, seeks to maximise own potential
Purpose in life	Own life has direction and meaning
Environmental mastery	Shows ability to change and manage personal environment to suit own needs
Autonomy	Has socially acceptable internal standards and values as guidelines in life
Personal relations with others	Ability to establish trusting interpersonal relationships
	Social well-being (positive social functioning)
Social acceptance	Positive towards and accepting diversity in people

Social actualisation	Believes in potential of others (individuals, groups and societies)
Social coherence	Finds society and social life meaningful and comprehensible
Social contribution	Regards own daily activities as adding value to society and others
Social integration	Experiences sense of relatedness, comfort and support from community

Note. Adapted from "Promoting and protecting mental health as flourishing: A complementary strategy for improving national mental health," by C. L. Keyes, *American Psychologist, 62*(2), p. 98.

2.5.2.4 Outcomes of flourishing at work on individuals and organisations

Flourishing individuals develop congenial, trusting interactions with others and are eager to develop their potential to grow and expand as a person (Bakker & Sanz-Vergel, 2013; Diener et al., 2010). Individual-level outcomes of flourishing at work entail high levels of satisfaction and job satisfaction, more effective learning, healthier relationships and longevity in health and positive performance-related outcomes (Keyes, 2004, 2011; Seligman, 2011). Employees with greater levels of individual well-being tend to report increased profits, stronger loyalty and satisfaction of customers, increased rates of employee retention and attendance, and higher levels of productivity (Keyes et al., 2000). Diedericks and Rothmann (2014) examined the relationships between flourishing at work and individual and organisational outcomes for employees within South African IT organisations. The results showed that flourishing at work of IT employees has a strong direct positive impact on job satisfaction (27% of variance shared) and a negative impact on turnover intention. Furthermore, their study found that IT professionals tend to engage in counterproductive behaviour, such as abusing the internet or playing games when job satisfaction scores registered lower.

2.6 In-role performance

Role theory provides a theoretical foundation for describing the consistencies and differences of individual behaviour (Zhu, 2013). Using this theory, in-role behaviour, and in-role performance, more specifically, refers to core-task performance. Zhu (2013) suggests that in-role performance involves one part of an individuals' work, while simultaneously being reflected in the official remuneration system within an organisation. The categories used to

assess employee performance of in-role behaviours within organisations include aspects such as: ratings, quality appraisals, document data records and delay of work (Zhu, 2013). Research describes in-role performance as the needed outcomes and individual behaviours outlined by individual employees' job description, contributing to organisational goals (Van Wingerden & Poell, 2017; Williams & Anderson, 1991).

2.6.1 Job performance theory

Several definitions of performance have been proposed in the literature. Campbell, McHenry and Wise (1990) define job performance as the activities or behaviours that are essential to achieve organisational objectives. These activities or behaviours can either be productive or counterproductive and will support or undermine an organisation's goals (Bahmani et al., 2016; Singh, 2016). Research indicates that job performance focuses on whether individual behaviours are effective and contribute to the organisation's success. Job performance is a multidimensional concept that should include either one of two factors: task performance and contextual performance (Bahmani et al., 2016; Motowidlo & Van Scotter, 1994). These two factors are also referred to as in-role and extra-role performance, respectively. It is argued that both types of performance provide an all-inclusive picture of employees' overall performance in their jobs (Torrente, Salanova, Llorens, & Schaufeli, 2012).

Numerous studies have indicated that employees demonstrate the best job performance in challenging and resourceful work environments (Bakker et al., 2012; Tims et al., 2015). Weseler and Niessen (2016) point out that employees' performance varies according to active extension and reduction of tasks and relationships at work, in addition to these individuals' perceptions about their jobs. This assumption is based on SDT and research on counterproductive work behaviour (Gruys & Sackett, 2003).

Job performance is a particularly imperative focus for researchers and practitioners within the context of organisations (Bahmani et al., 2016). In the working environment, job performance entails a significant measure by providing a benchmark to assess important aspects in the employees' life-cycle, for example, advancement or reward at work (Mahapatro, 2010). It is important to distinguish job performance from efficiency and productivity in the work setting: efficiency measures the effects of performance, while productivity measures success against the cost of achieving the work products (Sonnetag, Volmer, & Spychala, 2008). According to

Appelbaum, Marchionni and Fernandez (2008) as well as Ahmad, Yusuf, Shobri and Wahab (2012) job performance can be considered as the most relevant and critical dependent variable and construct in research and practice of industrial-organisational psychology (IOP).

2.6.2 Distinguishing extra-role from in-role performance

Since the mid-19th century, Katz (1964) first distinguished extra-role from in-role behaviours. Further research demonstrates that in-role and extra-role performance contributes to organisational outcomes in various ways. Extra-role performance, also commonly referred to as organisational citizenship behaviour (OCB), on the other hand, denotes employees' actions, which are not reflected in formal work descriptions or linked to the official remuneration system of the organisation (Williams & Anderson, 1999; Zhu, 2013). Where in-role performance is the 'core behaviour' that specifies the formal part of an employee's position in an organisation, extra-role performance entails behaviour beyond the official requirements of the role; otherwise labelled as the 'arbitrary behaviour'. Through extra-role behaviour employees go above and beyond their expected performance to help the organisation function more effectively (Kaplan, Bradley, Luchman, & Hayes, 2009). Such behaviour includes acts of cooperation, helpfulness, suggestions, gestures of goodwill and altruism, which have a positive impact on the daily work environment (Smith, Organ & Near, 1983).

In-role performance refers to the formally required outcomes and behaviours that are aligned directly with organisations' aims (Motowidlo & Van Scotter, 1994; Van Wingerden et al., 2017). Furthermore, this type of behaviour contributes to the organisation's technical core (Kaplan et al., 2009; Taris, 2006; Zhu, 2013). This is done by accomplishing technical processes or by either maintaining or servicing its technical requirements. In addition, this aspect of performance refers to employees' officially prescribed job responsibilities that are outlined in the job description (Williams & Anderson, 1991). Of further relevance to this type of job performance is how effective employees perform tasks that contribute to the organisations' technical core (Van Wingerden et al., 2017).

In-role performance has been the traditional focus of organisational research and practice. This type of behaviour has predominantly been related to job demands such as emotional task requirements, whereas job resources indicate extra-role performance (Bakker, Demerouti, & Verbeke, 2004). Rich, Lepine and Crawford (2010) argue that a behavioural conceptualisation

of job performance is appropriate when using concepts that involve human agency, for example, transformational leadership and job crafting. Williams and Anderson (1991) note that the criteria to assess individuals' performance in terms of their in-role behaviour, is typically separated into four groups, namely: the rating, quality of the assessment, the standard of quantity, and the document data record (including absence records and delays in work). Bakker and Heuven (2006) investigated emotional dissonance, burnout and in-role performance among nurses and police officers. Their study shows that the primary tasks of nurses are washing patients and serving meals, while police officers mostly have to conduct street surveillance and respond to alerts from the public. Considering the context of the variables under investigation in conjunction with the objectives of the study, the present study focused on in-role performance.

2.7 Exploring the relationships between transformational leadership, job crafting, flourishing at work and in-role performance

Transformational leaders inspire followers to achieve beyond expectations by highlighting long-term goals, creating a vision of the future and encouraging employees to pursue that vision (Wang, 2017). Thus, transformational leaders motivate employees to change their work environment and job attributes to achieve their goals, become more engaged and perform better. Breevaart et al. (2015), as well as Crawford, LePine and Rich (2010) and Wang (2017) point out that, under a transformational leader, individual employees may make changes to expand their task and relational environments, and seeking resources behaviours. Transformational leadership can be characterised as a critical antecedent of proactivity at work and is, therefore, associated with the increased expansion of job crafting (Wang, 2017).

Although limited studies have examined the effect of transformational leadership on job crafting, in particular, scholars have noted the positive link between job crafting and transformational leadership (Breevaart et al., 2015). Wang, Demerouti and Le Blanc (2017) found that transformational leadership has a direct effect on seeking resources and an indirect effect on seeking challenges. Furthermore, research by Piccolo and Colquitt (2006) demonstrates that under transformational leadership, employees display high levels of skill variety and task significance. Although job crafting is initiated by individual employees themselves, the role of transformational leadership is argued to be critical in determining the possibility and resources for job crafting behaviours (Harju et al., 2016; Wrzesniewski &

Dutton, 2001). The present study postulates a relationship between dimensions of transformational leadership and job crafting, as indicated by the following propositions:

Proposition 1a: Transformational leadership dimensions explain a significant proportion of the variance in increasing structural resources.

Proposition 1b: Transformational leadership dimensions explain a significant proportion of the variance in decreasing hindering job demands.

Proposition 1c: Transformational leadership dimensions explain a significant proportion of the variance relationship in increasing social job resources.

Proposition 1d: Transformational leadership dimensions explain a significant proportion of the variance in increasing challenging job demands.

Research indicates that transformational leaders exert their influence beyond exchange relationships, inspire others and motivate subordinates to achieve beyond expectations, thereby enhancing individuals' positive affect and well-being (Arnold, Turner, Barling, Kelloway, & McKee, 2007; Bakker & Demerouti, 2007). Literature suggests that high-quality leadership has an impact on employees' levels of well-being (Arnold et al., 2007). More specifically, a transformational leadership style encourages individual well-being through the behaviours of idealised influence, individualised consideration, intellectual stimulation and inspirational motivation. These behaviours allow employees to work on job tasks innovatively, experience a positive self-image and feel that the leader considers their best interests, which thus improves their overall well-being (Verbraak, 2014).

Van Dierendonck, Haynes, Borill and Stride (2004) explored leader behaviour and its influence on context-free psychological well-being and job-related affective well-being. Their findings showed that high-quality leadership styles were linked to enhanced employee well-being in general. Arnold, Turner, Barling, Kelloway, and McKee (2007) investigated transformational leaderships' association with psychological well-being, moderated by perceptions of the meaningfulness of work. The study showed a positive correlation between transformational leadership and affective well-being. Furthermore, research conducted in several countries by Verbraak (2014) demonstrated that transformational leadership is correlated significantly

positively with psychological, social and physical well-being. Therefore, the present study proposes that transformational leadership will also have a positive relationship with flourishing at work. Based on the presented literature, the following proposition is presented:

Proposition 2: Transformational leadership dimensions explain a significant proportion of the variance in flourishing at work.

Furthermore, transformational leaders have high-performance expectations and set high-performance standards for their employees by acting as role models (Zhu & Mu, 2016). A meta-analysis by Judge and Piccolo (2004) indicates that transformational leadership is associated with positive work outcomes such as in-role performance. Similary, Wang (2017) demonstrates that transformational leadership influences positively how well employees perform at work. Another meta-analysis conducted by Wang, Oh, Courtright and Colbert (2011) showed that transformational leadership is related positively to followers' performance at individual-level for various types of criteria, with a stronger relationship for contextual performance than for task performance across most study settings. Harju, Hakanen and Schaufeli (2016) found that transformational leadership leads to personal growth, professional development, and work performance by fostering a positive climate. Thus, the present study posits the following proposition:

Proposition 3: Transformational leadership dimensions explain a significant proportion of the variance in in-role performance.

Literature on job crafting indicates that employees alter the physical, task and relational boundaries of their jobs to become more satisfied and thriving within the workplace (Demerouti, Bakker, & Gevers, 2015; Tims et al., 2012). Researchers note that job crafting seemingly stimulates individual flourishing at work which encourages job redesign and the creation of personal meaning (Seligman, 2011). Job crafters are well-positioned to experience flourishing at work by using an abundance of resources to invest in their jobs and make adjustments that may benefit themselves and the organisation (Demerouti et al., 2015; Wrzesniewski, LoBuglio, Dutton, & Berg, 2013). In this regard, flourishing-at-work employees shift from a one-size-fits-all perspective of the job description to an individualised enactment of their work.

Studies advocate that job crafting stimulates employee flourishing at work as it steers individuals toward their passions and allows them to enjoy their tasks, which is key to enhancing an individual's well-being (Demerouti et al., 2015; Seligman, 2011). Research conducted by Demerouti, Bakker and Gevers (2015) shows that the job crafting dimensions of seeking resources and seeking challenges are related positively, whereas the dimension of reducing demands is related negatively to flourishing at work. Furthermore, Bahmani, Muzafari and Mowlaie (2016) indicate that seeking resources and seeking challenges is linked positively to flourishing at work, while reducing demands is related negatively to flourishing at work. Bahmani et al. (2016) note that the more employees seek resources and challenges at work, the more they flourish in their roles. If job demands are reduced, employees flourish less since they have to function within a less stimulating environment, according to Petrou, Demerouti, Peeters, Schaufeli and Hetland (2012). Overall, their study concluded that all dimensions of job crafting were found to benefit flourishing at work. Based on these findings, the present study makes the following proposition:

Proposition 4: Job crafting dimensions explain a significant proportion of the variance in flourishing at work.

Research indicates that employees who engage in job crafting are satisfied with their work and channel these positive feelings to increase performance in work roles (Tims et al., 2013; Wang, 2017). Tims and Bakker (2010) point out that job crafting facilitates performance since employees who make alterations to the design of their jobs, proactively align job demands and job resources with their own needs and capabilities.

Although literature centred on job crafting is careful with statements about the effect of job crafting on work performance, several scholars have demonstrated a link between the aforementioned variables (Van Wingerden et al., 2017). A study by Bakker, Tims and Derks (2012), for example, showed that job crafting is associated positively with colleague-ratings of in-role performance, predicted by proactive personality through work engagement. A cross-sectional study by Demerouti et al. (2015) indicated a positive indirect relationship between seeking resources and performance through work engagement while reducing demands show a negative indirect relationship with performance through work engagement. In addition, Petrou, Demerouti and Schaufeli's (2015) longitudinal research one year later showed that

performance is predicted by seeking resources. Based on their research, the following proposition is presented:

Proposition 5: Job crafting dimensions explain a significant proportion of the variance in in-role performance.

Researchers have found that the sustainability of high performance within organisations is ensured by the emotional, psychological and social health of employees (Rautenbach, 2015). Flourishing employees are content, engaged, experience intrinsic motivation and thrive at work (Diedericks & Rothmann, 2014; Seligman, 2011). Therefore, the notion of the content, productive worker has been emphasised within academia, demonstrating that employees' well-being influences performance ratings within the workplace (Harter, Schmidt & Keyes, 2002; Keyes et al., 2000). Several studies have indicated the positive relationship between well-being and performance. For example, research by Harter, Schmidt and Keyes (2002) found that positive and negative affect related to overall or technical performance in a positive or negative direction.

Furthermore, Howell (2009) points out that moderate levels of flourishing may influence performance in various forms, while Van Zyl and Rothmann (2012) showed that levels of flourishing or languishing may impact individuals' performance in an educational setting. There is a dearth of literature available on flourishing at work and in-role performance, as studies tend to focus on educational contexts. From a different angle, the present study proposes that flourishing at work will be related positively to in-role performance. Thus, the following proposition is presented:

Proposition 6: Flourishing at work explains a significant proportion of the variance in in-role performance.

Based on the literature reviewed in this section, it can be argued that transformational leaders are often regarded as the driving force behind positive work behaviours and enhanced motivation on the job, particularly according to Podsakoff, MacKenzie, Moorman and Fetter (1990). The importance placed on the managerial and leadership component of the relationships between these variables within the literature is evident (Breevaart et al., 2016; Harju et al., 2016).

2.8 Conclusion

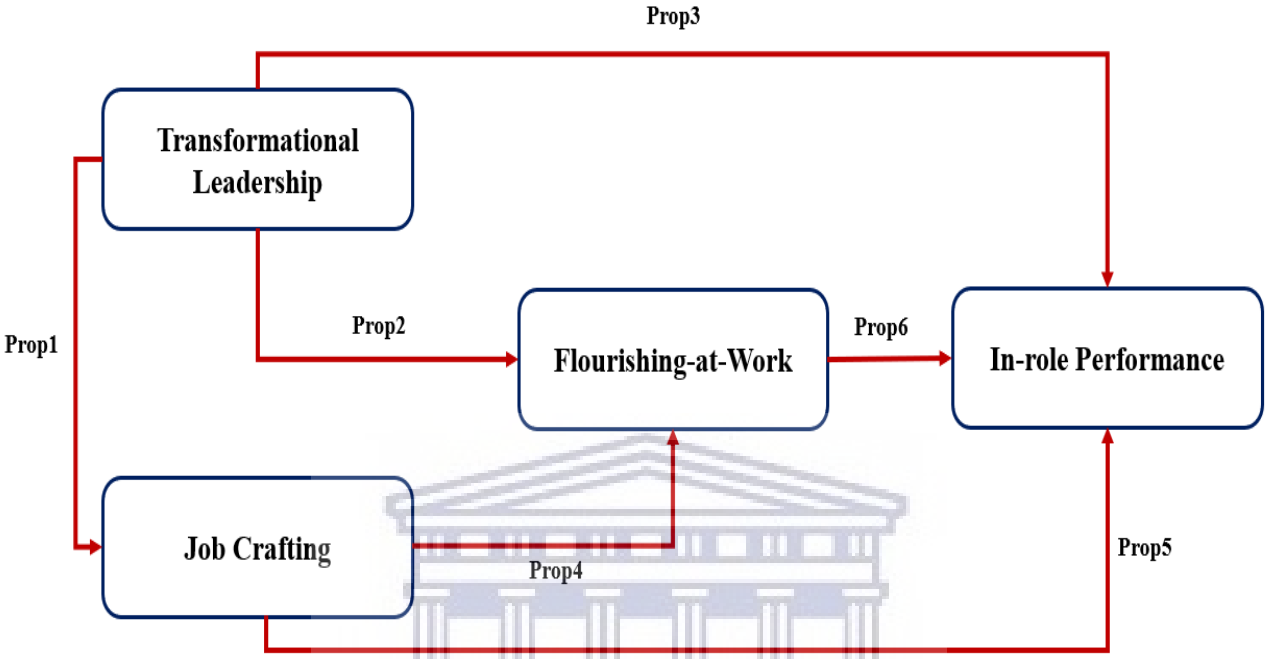
The present chapter provided a comprehensive synopsis of the prevalent literature on constructs of transformational leadership, job crafting, flourishing at work and in-role performance. It is apparent from the academic literature that the variables under investigation have become crucial for organisations to focus on. The need for organisations to adapt job designs and utilise more effective management strategies in the current challenging work climate has contributed to the growing interest in transformational leadership and job crafting constructs. As global competition determines organisational needs in the modern era, the focus on the well-being of employees (Bakker & Sanz-Vergel, 2013) and their job performance (Bahmani et al., 2016) are paramount to an organisation's success.

Based on the academic research outlined in the literature review, an overview was given of the common definitions for the following constructs: transformational leadership, job crafting, flourishing at work and in-role performance. Bakker and Demerouti's (2014) Job Demands-Resources model was utilised in particular to gain understanding of transformational leadership, job crafting and flourishing at work. The JD-R model explains that job resources such as social support and effective leadership, buffers the adverse effects of job demands such as work overload and role ambiguity. As a result, employees languish instead of flourish, thereby performing poorly in their tasks. In this regard, several scholars note that employees with adequate access to resources are better equipped to cope with challenging and demanding work environments (De Beer et al., 2016; Tims et al., 2012; Van Wingerden et al., 2017).

As a final point, the relationships between the variables included in the study were examined, highlighting the associations between transformational leadership, job crafting, flourishing at work and in-role performance. A model is proposed that incorporates transformational leadership, job crafting, and in-role performance, as depicted in Figure 2.2 below. This figure presents the proposed relationships between dependent and independent variables as explored in the present study.

Figure 2.2.

Proposed Transformational Leadership, Job Crafting, Flourishing At Work and In-Role Performance Theoretical Model



In conclusion, it is important to note that organisations depend on their workforce to ensure a unique competitive advantage and efficiency of the organisation overall. In terms of organisations' functioning in the current era, research has indicated that individuals perform well under effective and transformative leadership, work settings that provide opportunities where they can adapt their job to suit individual needs, as well as in environments that enhance individual well-being. Thus, organisations must understand the impact transformational leadership and job crafting have on the company's prosperity. Management should develop and maintain effective leadership practices and approaches toward job design. Such development involves the consistent measuring of transformational leadership and job crafting factors, while considering the organisational context to meet employees' specific needs.

Chapter 3: Research design

3.1 Introduction

The discussion of existing academic literature presented in chapter 2 provides the groundwork for the research design and methodology described in this chapter. Müller-Staub (2012) emphasises the significance of ensuring quality research through well-defined problem statements and research questions based on comprehensive literature reviews. Also, the researcher must find congruence between the research problem, paradigm and methods. Müller-Staub adds that the description of research methods should exhibit a rigorous design, clearly articulated methods of data collection, a well-represented sample and applicable measurement procedures.

The research design refers to the selected strategic framework that incorporates the different elements of a research study in a structured, comprehensible and logical manner. Such an approach ensures the central research problem is addressed efficiently. The research design establishes an outline for data collection, measurement and analysis. The design of the research must provide thorough and in-depth information on the method employed, including sampling, data collection and analysis of data (Pandey & Pandey, 2015; Rajasekar, Philominathan, & Chinnathambi, 2013; Terre Blanche, Durrheim, & Painter, 2006; Trochim & Donnelly, 2001). This chapter provides a comprehensive review of the research design used in the present study. The focus is particularly on the research methodology and specific approach followed to address the research question.

3.2 Research methodology

According to Wahyuni (2012), research methodology can be defined as a model incorporating the underlying sets of beliefs that help the researcher select a suitable research method. More specifically, researchers decide on the tools and techniques which they will use to obtain, organise and analyse data (Walliman, 2011). The research methodology entails the design, study setting, sample, limitations, data collection and analysis practices (Burns & Grove, 2003). Assessment of the methodology utilised in a study depends on the fit with research questions and aims (Holloway, 2005). Walsham (1995) points out that the onus lies with the researcher to describe the methods of research and explain why particular approaches have been selected. The methodology must be applied suitably to ensure appropriate conclusions are being drawn

from the study regarding the phenomena under investigation (Wahyuni, 2012; Walliman, 2011). For the purpose of the present research, the term research methodology refers to the rational sequence and how the research was undertaken. Scholars typically distinguish two primary approaches to research, namely qualitative and quantitative methods (Bryman, 2016).

3.2.1 Qualitative research

Atieno (2009), Flick (2014) and Yilmaz (2013) define qualitative research as an approach that gathers extensive data on several variables over protracted periods, and within natural environments to gain insights not easily obtained through other research methods. Essentially, qualitative research emphasises words instead of statistical measurements to form hypotheses, making it interpretive and ethnographic in nature. The underlying assumption of qualitative research is that it is impossible to define which factors are important and should be included to the exclusion of others (Atieno, 2009).

This type of research is valuable for several reasons, as described by Rahman (2017). Qualitative research generates a detailed account and deep-set insight into respondents' beliefs, experiences and feelings. The qualitative approach also provides a comprehensive understanding of individual experiences within settings. By discovering the way meanings are formed through and in culture, researchers can understand individuals' inner experiences and relay this information through their working assumptions. Data are collected through methods such as semi-structured interviews, direct participant observation, case-study research and action research. These methods enable direct interaction between respondents and the researcher, making the research thorough and subjective. A key advantage of qualitative research is that the design has a flexible structure that can be reconstructed to accommodate the investigation of complex issues.

Beyond the benefits of qualitative research mentioned above, there are certain disadvantages to the approach. Silverman (2010) notes that meanings and individual experiences are often ignored at the expense of avoiding contextually sensitive issues. Regarding credibility, a qualitative approach is often favoured in the social sciences by various stakeholders due to this approach's consideration of social and cultural constructions of the variables under investigation (Rahman, 2017). The approach furthermore uses a smaller sample sizes, which increases the concern of generalisability. Flick (2011) notes that the results of qualitative

research can only be generalised to the study population in a limited manner. A further limitation of qualitative research involves the difficulty and complexity of data analysis and interpretation due to its time-consuming nature and stringent requirements (Rahman, 2017).

3.2.2 Quantitative research

Bryman (2016) and Yilmaz (2013) indicate that quantitative research has a deductive focus. This means testing the relationships between theories, incorporating formal statistical measurements and positioning the social world externally and objectively. Such an approach to research use tools such as experiments and surveys (Bhattacherjee, 2012). Yilmaz (2013) notes that the quantitative approach is a form of empirical research that investigates social phenomena by testing a theory, which integrates certain variables. These variables are measured and analysed to confirm whether the theory explains or predicts phenomena of interest. Atieno (2009) argues that quantitative research ensures validity through rigorous clarification and definition. Achari (2014), Atieno (2009) and Kothari (2004) identify three types of quantitative data:

- *Inferential:* a database is formed from which to infer characteristics or relationships to the broader population. Such an approach usually includes the use of survey research, which studies a sample to identify trends and characteristics shared among the population.
- *Experimental:* allows for a greater span of control over the research environment in which the chosen variables are manipulated to assess its effect on other variables.
- *Simulation:* produces an artificial environment within which relevant data and information can be generated. Dynamic behaviours of a system or sub-system can be observed under controlled conditions. The purpose of a simulation is to represent the behaviour of process over a certain period.

According to Rahman (2017), quantitative research is founded on the positivist paradigm concerned with the measuring of variables. In this regard, quantitative research has the advantage of generalising results to an entire population or sub-population by random selection and a larger sample size, which enhances the credibility of the research findings. Furthermore, the analysis of data is more time-efficient as it uses statistical software programmes (Rahman,

2017). Choy (2014) points out that quantitative research provides reliability by critical analysis and facilitates numerical data for groups by eliciting agree or disagree responses.

When acknowledging the strengths of quantitative research, it is important that its shortcomings should also be considered. Rahman (2017) argues that quantitative research at times may neglect human perception or beliefs, thus, omitting common meanings of social reality, or how this reality is shaped and maintained. This mentioned deficiency is especially relevant within highly controlled settings (Ary, Jacobs, Sorensen, & Walker, 2013). Furthermore, the findings of such an approach can only be applied to a certain point in time, providing a 'snapshot perspective' of variables and, thereby of the social phenomena. Tewksbury (2009) indicates that bias inaccuracies are also a concern with the quantitative approach due to the risk of respondents providing socially desirable answers.

To achieve the aims of the present research, a quantitative, cross-sectional, ex-post-facto design was used. This design was considered the most suitable to assess the study's pre-determined research propositions and for determining interrelationships and its impact on the overall population. This study utilised a positivistic research paradigm, for a statistical summary of the data generated on a single occasion (Kothari, 2004). Furthermore, the proposed reporting of the research findings was based on previously validated measuring instruments that was tested through statistical procedures.

3.3 Research propositions

According to Bailey (2008) and Zikmund, Babin, Carr and Griffin (2013), propositions can be defined as statements that explain the rational associations among certain concepts or variables by affirming an underlying connection between these concepts. A proposition discloses the potential and explicit relationships the problem under investigation. Furthermore, a proposition should demonstrate what is to be proven and dealt with (Rwegoshora, 2016). Field (2013) indicates that the independent variable (otherwise referred to as a predictor variable) in the study is assumed to be the *cause* due to its independence from any other variable. Conversely, a dependent variable (otherwise referred to as an outcome variable) is assumed to be an *effect* variable since it depends on the causal variable.

The literature review undertaken in chapter 2 provided the basis for developing the propositions. These propositions guided the quantitative research that was conducted on a sample of IT professionals within the public sector and technology and e-commerce organisations. These propositions formed the foundation of the present research, as described in Table 3.1 below.

Table 3.1

Research Propositions Examined in the Present Study

Number	Propositions to be tested
Proposition 1a	Transformational leadership dimensions explain a significant proportion of the variance in increasing structural resources.
Proposition 1b	Transformational leadership dimensions explain a significant proportion of the variance in decreasing hindering job demands.
Proposition 1c	Transformational leadership dimensions explain a significant proportion of the variance relationship in increasing social job resources.
Proposition 1d	Transformational leadership dimensions explain a significant proportion of the variance in increasing challenging job demands.
Proposition 2	Transformational leadership dimensions explain a significant proportion of the variance in flourishing at work.
Proposition 3	Transformational leadership dimensions explain a significant proportion of the variance in in-role performance.
Proposition 4	Job crafting dimensions explain a significant proportion of the variance in flourishing at work.
Proposition 5	Job crafting dimensions explain a significant proportion of the variance in in-role performance.
Proposition 6	Flourishing at work explains a significant proportion of the variance in in-role performance.

3.4 Research respondents

Bhattacherjee (2012) and Trochim (2006) view sampling as a statistical process in which a subgroup of a population of interest is chosen from which to draw statistical conclusions and inferences about the population. Essentially, sampling means gathering information about the whole population and only investigating a part of it (Haque, 2010). This part of the population, otherwise referred to as a sub-set, is representative of the population and carries the benefit of allowing research to be conducted in a convenient, cost-effective and time-effective manner (Sharma, 2017). The aim is to choose the most appropriate sampling technique to obtain consistent, valid and precise results (Haque, 2010; Sharma, 2017). The selected study population for the present research comprised all employees within the IT divisions of the public sector and technology and e-commerce organisations in South Africa.

3.4.1 Sampling procedure

To achieve the objectives of this study, a non-probability sampling technique was utilised to select respondents from the population. With this type of sampling, a subjective approach is followed to determine which characteristics from the population of interest will be used in the sample (Acharya, Anupam, & Nigam, 2013; Etikan, Musa, & Alkassim, 2016). Thus, randomisation is not critical and the chance of selection is unknown (Etikan, Musa, & Alkassim, 2016). There are several types of non-probability sampling, for example, convenience, purposive, and snowball sampling (Acharya et al., 2013).

For the present research, a technique has been employed of non-probability, purposive sampling (otherwise known as judgement sampling). Etikan, Musa and Alkassim (2016) describe purposive sampling as the intentional selection of respondents due to the qualities they possess. The researcher therefore subjectively determines what is required to be known and seeks out individuals who are willing and able to share information about their knowledge and experience in this regard (Etikan, Musa, & Alkassim, 2016). The limitations of this type of sampling procedure is the inability to generalise findings to the broader population and reduced variability. Despite the limitations, the benefits of using this method are important to note. Such a sampling technique is cost-effective and a list of all population elements is not required (Acharya et al., 2013; Etikan, Musa, & Alkassim, 2016). Purposive sampling was considered appropriate for the present study as it focuses on individuals who are IT professionals and in particular have knowledge and experience about the IT environment.

3.4.2 Profile of the sample population

The study population for the research comprised 892 employees within the IT divisions of three South African organisations (two public sector organisations and one technology and technology and e-commerce organisation). A total of 164 individuals completed the questionnaire, which equated to an 18.38% response rate to the survey. Table 3.2 to follow, indicates the biographical and demographic profile of the sample selected from the population.

Table 3.2

Profile of Respondents' Biographical and Demographic Information (n [public sector] = 122; n [private sector] = 42)

Item	Category	Frequency (n)	Percentage (%)
Gender	Male	130	79.3%
	Female	34	20.7%
Age	Under 18	1	.6%
	25-34	35	21.3%
	35-44	59	36.0%
	45-54	48	29.3%
	55-64	21	12.8%
Ethnicity	African	18	11.0%
	Coloured	70	42.7%
	Indian	3	1.8%
	White	54	32.9%
	Prefer not to say	19	11.6%
Highest level of education	Doctorate	2	1.2%
	Masters	6	3.7%
	Honours	25	15.2%
	Bachelors' degree	30	18.3%
	Diploma	55	33.5%
	Higher Certificate	19	11.6%
	Matric	27	16.5%
Employment type	Permanent	157	95.7%
	Contract	6	3.7%
	Other	1	.6%
Tenure in current position	Less than 5 years	71	43.3%
	5-10 years	38	23.2%
	11-15 years	26	15.9%
	16-20 years	14	8.5%
	21+ years	15	9.1%

From Table 3.2 it is evident that a significant portion of the participating population was from 35 to 44 (36.0%) and male (79.3%). The ethnic distribution of the respondents indicated a Coloured majority (42.7%) within the target population, followed by White (32.9%), African (11%), Indian (1.8%), while 11.6% preferred not to say. More than half the sample (55.5%) represents previously disadvantaged population groups within South Africa, which is indicative of the implementation of Broad-Based Black Economic Empowerment (B-BBEE) as a transformation policy within South African organisatons. A significant portion of the population indicated that they had at least a diploma or higher level of education. While candidates of all forms of employment statuses were invited to participate in the study, only 3.7% of the sample consisted of contractors. A significant part of the respondents (43.3%) indicated a tenure of less than five years in their current position. This finding reflects of the volatile climate within the IT sector in South Africa.

3.5 Method of data collection

A standardised quantitative survey was used to gather respondent information, as it was considered to be the most suitable method to obtain accurate insights and reliable data on the variables under investigation. Check and Schutt (2012) explain that survey research groups the information from a sample of respondents based on their answers to set questions. This method of data collection is most frequently used within applied social and psychological research to understand human behaviour, where responses are gathered in standardised format (Kelley, Clark, Brown, & Sitzia, 2003; Ponto, 2015). Questionnaires can either be constructed by the researcher, or are used based on pre-existing surveys to be completed by respondents themselves. Standardised questionnaires characteristically include measuring scales and are cross-sectional, implying that data are collected at only a single point in time to gather information on respondents' attitudes, behaviours and biographical features (Mathers, Fox, & Hunn, 2007).

The key benefit of utilising a standardised questionnaire is a greater degree of internal and external validity of the produced results, which can be generalised to the sample population. Surveys are tested for reliability and validity and may include normative data, which can be used as a standard to compare findings (Mathers et al., 2007). Furthermore, a large amount of empirical, real-world data can be produced by using a standardised questionnaire, coupled with the potential to cover numerous individuals (Kelley et al., 2003). Surveys can be done at relatively low costs and within brief time frames.

3.5.1 Web-based questionnaires

A web-based questionnaire was utilised for data collection in the present study. Niessen, Meijer and Tendeiro (2016) note that within the behavioural and social sciences, the internet is progressively being used to collect data. This mode of data collection is effective, with no detrimental impact on the data quality. Additionally, data collection through the internet holds the following benefits: cost-saving, reduced data entry and coding faults, programmed application of skip patterns, fewer socially distorted responses, avoiding non-response to items and a decrease in administrative issues (Gnambs & Kaspar, 2017; Terluin, Brouwers, Marchand, & de Vet, 2018). Furthermore, compared to paper-and-pencil modes of test administration, web-based surveys have been shown to produce equivalent results (Niessen, Meijer, & Tendeiro, 2016; Terluin et al., 2018).

While the advantages of web-based surveys are apparent, it is important to discuss the method's limitations. According to Archer (2007), non-response bias may be more apparent for web-based surveys, seeing that the decision not to respond is maybe made more quickly. Furthermore, the computer literacy levels of respondents may differ and the whole population will be unable to use the survey method since not all individuals are connected to the internet. The scholar also points out that screen configurations could appear differently depending on the settings of differing computer devices, and e-mail addresses are not standardised.

Despite the limitations of web-based questionnaires, it is clear that the benefits exceed the challenges. According to Heiervang and Goodman (2011), online questionnaires are faster to administer, have fewer data collection costs than traditional surveys and allow for enhanced data quality. Thus, it is expected that respondent rates may increase and instances of non-response will be reduced as researchers find a web-based questionnaire format more appealing (Roztocki & Morgan, 2002). Since the present study used a sample from the IT sector, a web-based questionnaire was deemed the best fit in light of the high level of computer literacy of the respondents.

3.5.2 Measuring instruments

The reliability of the chosen measuring instruments will be reported to substantiate its application in the present research. Five sections were included in the self-administered web-based survey. The following research instruments were chosen: the Transformational

Leadership subscale of the Multifactor Leadership Questionnaire (MLQ-Form 5X-Short) developed by Avolio and Bass (2004); the Job Crafting Scale (JSC) designed by Tims et al. (2012); the Flourishing-at-work Scale (Rautenbach, 2015); and William and Anderson's (1991) In-role Behaviour Scale. The final section of the survey elicited responses where respondents provided biographical, educational and employment information. Respondents were provided with explicit and succinct instructions to help them complete the self-administered web-based survey. The various measuring instruments are expounded subsequently.

3.5.2.1 Transformational Leadership subscale of the Multifactor Leadership Questionnaire Form 5X-Short

The Transformational Leadership subscale of the Multifactor Leadership Questionnaire MLQ-Form 5X-Short (see Annexure C) was used to record employees' evaluations of their supervisors' transformational leadership behaviour. The MLQ-Form 5X-Short was designed by Avolio and Bass (2004). The Transformational Leadership subscale comprises 20 items related to idealised influence (8 items); inspirational motivation (4 items); individualised consideration (4 items); and intellectual stimulation (4-items). Items on the scale are rated on a five-point rating scale ranging from 1 (not at all) to 5 (frequently, if not always). The rater version of the measuring instrument was used.

The MLQ-Form 5X-Short has been researched and validated extensively in both academia and practice. This measuring instrument was selected as it can be utilised for employees' ratings of a transformational leadership style, in addition to its practical applicability within the context of the study. For the South African context, the reliability for the Transformational Leadership subscale is consistently higher than any other leadership dimension. Several studies report reliabilities ranging between .72 and .85 for the Transformational Leadership subscale (e.g. Theron, Krafft, & Engelbrecht, 2004; Vrba, 2007). The various factors are explicated below.

- The first factor is labelled *idealised influence*. Items that load on this dimension indicate employees' perceptions of the leaders' ability to arouse pride through their associations with others, consider the collective good above their self-interest, behave in a manner that encourages respect and regard, and demonstrate power and confidence. Furthermore, the factor concerns the leaders' communication of important beliefs and values, showing a

strong sense of purpose, their concern for the moral and ethical facets of decision-making and their collective sense of mission. Example items from this dimension are, "I go beyond self-interest for the good of the group", "I instil pride in others for being associated with me", "I consider the moral and ethical consequences of decisions", and "I talk about my most important values and beliefs".

- The second factor is labelled *inspirational motivation.* This factor indicates employees' perception of the leaders' ability to convey a sense of optimism about the future, show enthusiasm about achieving goals, clearly define and describe a captivating vision, and demonstrate confidence in accomplishing goals. Example items for this dimension are, "I talk optimistically about the future" and "I re-examine critical assumptions to question whether they are appropriate".
- The third factor is labelled *intellectual stimulation.* This dimension covers items related to leaders' ability to seek alternative perspectives on issues, confirm key assumptions for suitability, motivate followers to find new ways of improving services, and help them understand problems from a multi-faceted perspective. Example items are, "I re-examine critical assumptions to question whether they are appropriate", and "I seek differing perspectives when solving problems".
- The fourth factor is labelled *individualised consideration.* This entails the perception of the leaders' teaching and coaching of subordinates, how the leader treats others, recognition of personal capabilities, needs and aspirations, and facilitating the development of strengths. Example items are, "I help others to develop their strengths" and "I spend time teaching and coaching".

3.5.2.2 Job Crafting Scale

The Job Crafting Scale (HM) (see Annexure D) was used to measure employees' job crafting behaviours. The JCS was developed originally by Tims et al. (2012) based on the Job Demands-Resources (JD-R) model. Job crafting can be described as a self-initiated work behaviour in which employees partake to adjust their duties so that it fits their capabilities, preferences and needs. The JCS captures the four dimensions of job crafting: increasing structural resources; increasing social job resources; increasing challenging job demands; and decreasing hindering job demands.

Increasing structural job resources means increased opportunities for development, resources of variety and autonomy (Bell & Njoli, 2016; Tims et al., 2012). Decreasing hindering job

demands involves situations in which employees proactively decrease demands to their job which they consider as overwhelming. Increasing social job resources focuses on strengthening resources such as social support, feedback, and supervisory coaching. Increasing challenging job demands is concerned with developing capabilities to achieve difficult goals for greater personal growth and job satisfaction (Bell & Njoli, 2016; Tims et al., 2012).

The JCS is a self-report questionnaire that consists of 21 items, which measure the four mentioned dimensions: increasing structural resources (5 items); increasing social job resources (5 items); increasing challenging job demands (5 items); and decreasing hindering job demands (6 items). The scale utilises a five-point rating scale for respondents to indicate their job crafting behaviours, ranging from 1 (never) to 5 (very often).

Several international studies have demonstrated the scale's validity in the international context. Examples are Kim, Im, and Qu (2018) and Wrzesniewski, LoBuglio, Dutton and Berg (2013); while Bell and Njoli (2016), De Beer, Tims and Bakker (2016) and Koning (2014) have validated the scale for South Africa.

3.5.2.3 Flourishing-at-Work Scale Short Form

Employees' level of flourishing at work was assessed by using the Flourishing-at-work Scale Short Form (FAWS-SF), developed by Rautenbach (2015). The short form of the scale has been derived from the Flourishing-at-work Scale (FAWS), also developed by Rautenbach (2015). The scale was developed for the organisational context based on research by Keyes (2002) on flourishing in life. The dimensions of the FAWS-SF consist of 17 items related to emotional well-being (3 items); psychological well-being (9 items); and social well-being (5 items). Items are rated on a six-point Likert scale, ranging from 1 (never) to 6 (every day). The factors are described as follows:

- The first factor is categorised as *emotional well-being* and includes items related to job satisfaction and positive affect. Example items are, "During the past month at work, how often did you feel happy?" and "During the past month at work, how often did you experience satisfaction in your job?"
- The second factor is categorised as *psychological well-being* and comprises items related to autonomy, competence, relatedness, meaning, purpose, cognitive

engagement, emotional engagement, physical engagement and learning. Example items are, “During the past month at work, how often did you feel confident to think or express your own ideas and opinions?” and “During the past month at work, how often did you focus a great deal of attention on your work?”

- The third and final factor is categorised as *social well-being*, which consists of social contribution, social acceptance, social growth, social integration and social comprehension. Example items are, “During the past month at work, how often did you feel that you really belong to your organisation?” and “During the past month at work how often did you feel that people in your organization are basically good?”

The Flourishing-at-work scale has been researched and validated in both academia and practice. According to Rautenbach and Rothmann (2017), internal consistencies were acceptable for the scale, varying between .77 to .89. The scale has been validated for the South African context (Rautenbach & Rothmann, 2017a; Rautenbach & Rothmann, 2017b; Redelinghuys, Rothmann, & Botha, 2019). The scale was chosen for its practical applicability within the context of the study.

3.5.2.4 In-role Behaviour Scale

Employees’ level of in-role performance was measured by applying the In-role Behaviour scale developed by Williams and Anderson (1991). The scale comprises seven items ranging from 1 (“strongly disagree”) to 5 (“strongly agree”), with example items. “I adequately complete assigned duties” and “I engage in activities that will directly affect my performance evaluation”. The self-report questionnaire asked respondents to rate their level of performance using a solitary dimension. Bakker et al. (2012), Redelinghuys et al. (2018), Redelinghuys, Rothmann and Botha (2019) as well as Weseler and Niessen (2016) indicate reliability scores between .73 and .91. The studies have also validated the scale within both international (Bakker et al., 2012; Weseler & Niessen, 2016) and South African contexts (Redelinghuys et al., 2018; Redelinghuys et al.,2019).

3.5.2.5 Biographical and employment information

Respondents’ biographical information was collected in the final section of the self-reported, web-based survey with the categories: gender, ethnic group, age group, highest education level. This was done together with the employment information, which has the following categories:

length of service in industry, position, organisation and number of years working under the direct supervisor.

3.5.3 Ethical considerations

Careful consideration was given to the selection of suitable questionnaires ensuring only bias-free items would be included for data collection. The procedure for obtaining informed consent focused on respondents' voluntary participation in the study, thereby fully explaining the research purpose, the data analysis process and the manner of reporting data. Furthermore, respondents were made aware of both internal and external stakeholders who will be given access to the information derived from the research (see Annexure A). Before the data collection commenced, free and informed consent was confirmed from each respondent (see Annexure B), which also applied to the phases of research design and data collection.

Every effort was made to assure that the confidentiality of research respondents was maintained, especially considering the sensitivity of the topic under investigation. While emphasising that participation in the study is voluntary, respondents were asked to complete the questionnaire and were made aware that they could withdraw their participation at any stage, without repercussions. Respondents received an information sheet that explained the purpose of the research and what the study would involve, in addition to the mentioned informed consent form, before receiving the questionnaire. The information sheet provided a detailed description and endorsement of the following research aspects:

- The nature and purpose of the questionnaire.
- Clarification of the procedure to complete the questionnaire (study procedure), including the deadline for the submission of completed responses.
- A description of the risks involved in participation.
- An outline of possible benefits and compensation for participation.
- Confidentiality ensured and specifying how participant feedback and information will be used.
- The voluntary nature of the study confirmed.

Respondents obtained access to the survey through an anonymous on-line link sent to individual e-mail addresses. Additionally, participants were asked to provide biographical data

only for reporting purposes. The anonymous responses allowed for a larger response rate on the questionnaire and ensured genuine and honest responses were elicited from individuals.

3.6 Data collection procedure

Permission to conduct the study was granted by the Humanities and Social Sciences Research Ethics Committee (HSSREC) at the University of the Western Cape. After ethical clearance, the researcher approached the department heads of IT divisions within the public sector and technology and e-commerce organisations. E-mails were sent to the relevant heads, detailing the purpose, confidentiality and voluntary nature of the study. Additionally, information was given on the expected timeframes in which the data would be collected. A direct approach was deemed necessary and the researcher delivered brief presentations of the study to senior stakeholders at the relevant institutions.

The department heads of each organisation were asked to distribute an e-mail notification informing employees of the research and encouraging participation, to generate an adequate number of responses. After given permission to proceed with data collection, the researcher was granted access to employees' e-mail addresses for the participating institutions. Respondents received the web-based survey through an electronic link forwarded by e-mail, which allowed them to access the survey anonymously.

The electronic survey included an information sheet (see Annexure A), which outlined the procedure, risks, benefits and compensation, confidentiality and voluntary nature of the study. Informed consent (see Annexure B) was also obtained from each respondent before allowed to proceed with answering the web-based survey. The survey further included the four measuring instruments used to assess the variables under investigation: transformational leadership, job crafting, flourishing at work and in-role performance, in addition to a section requesting respondents' demographic information (see Annexure G). Data collection commenced on 18 February 2019 through the SurveyMonkey interface and was completed on 16 May 2019. Weekly reminders were sent to candidates, prompting participation. It was expected that the survey would take individuals approximately 15 minutes to complete. A total of 892 web-based surveys were distributed to potential respondents and 164 surveys were returned.

3.7 Missing data

The problem of missing values had to be attended to before commencing the data analysis. During the analysis of multivariate data, missing values must be addressed as these may potentially pose a threat to the sample's representativeness. Using web-based format questionnaires, it is difficult for the researcher to control participant behaviour and ability or willingness to respond to the survey. In the case of missing values, multiple imputation was used to address this issue. Missing values are substituted by values derived from one or more other cases that indicated a similar response pattern over a set of matching variables through this technique (Lorenzo-Seva & Van Ginkel, 2016).

Respondents were asked to complete every item in all sections of the survey. Each respondent was given two weeks to complete the questionnaire at his/her convenience. This was due to the length of the questionnaire in terms of the number of questions. The literature cites several reasons why respondents would not complete the survey, namely due to the length, topic or complexity (O'Reilly-Shah, 2017).

3.8 Data analysis techniques

The data obtained from the survey were analysed using the IBM SPSS Software Package Statistics for the Social Sciences (SPSS) Version 25. Since quantitative data were generated due to the employed research design, respondent data were analysed using techniques defined by the type of data (quantitative) and the requisite descriptive statistics. To analyse the data and test the proposed associations among variables, several statistical techniques were used. The statistical analysis of data took place in three broad phases, which are described in the following subheadings.

3.8.1 Phase 1: Reliability of the instruments

It was essential to re-examine the reliability of the instruments used in this research study before beginning the process to transform the data.

3.8.1.1 Reliability of measuring instruments

To measure the internal consistency of the measuring instruments employed in the study, Cronbach's alpha coefficients (α) were calculated to determine whether these measuring instruments will produce identical results if re-used under comparable conditions. Bonett and Wright (2015) explain that Cronbach's alpha coefficients are used extensively to evaluate reliability in the social and organisational sciences. Cronbach's alpha is expressed as a value between 0 and 1 with higher values showing stronger reliability, which demonstrates the inter-relatedness of the items for the measuring instrument (Tavakol & Dennick, 2011). According to Nunnally (1978) and Pallant (2013), a minimum Cronbach's alpha of .70 is recommended, although this benchmark may vary depending on the level of reliability needed and the nature and intention of the measuring instrument. Kline's (1999) principles, indicated in Table 3.5 below, could be used to evaluate the reliability of the sample.

Table 3.3

Cronbach's Alpha Ranges and Associated Internal Consistency Rating

Cronbach's alpha	Internal consistency
.90	Excellent (high-stakes testing)
.70 to .90	Good (low-stakes testing)
.60 to .70	Acceptable
.50 to .60	Poor
.50	Unacceptable

3.8.2 Phase 2: Descriptive statistics

Several descriptive statistics were applied during the second phase of data analysis. Pallant (2013) explains that descriptive statistics are used to describe the characteristics of the sample, determining whether any assumptions underpinning the statistical techniques were not

reflected. These techniques were applied to answer the main research question as well as other specific research questions. The following descriptive statistics were used in the present study:

- To describe a central tendency within the data, the mean (M) was determined by adding all values of a variable, divided by the total number of values for that variable (Field, 2013).
- According to Field (2013), the standard deviation (SD) is determined by calculating the square root of the variance, which ensures the average error measurement is present in the same units as the initial measure. The present study reported on standard deviation, rather than variance, as the former serves as a direct type of variance.

3.8.3 Phase 3: Inferential testing

The data gathered from the study sample were analysed through inferential testing. Statistical procedures were followed to deduce the truth or falsify the presented research propositions. Each of these propositions and bulk of the study aims were addressed in this third phase of the data analysis. The variables under investigation and the respective subscales in the present research were tested using linear and multiple regression analysis to establish bivariate and multivariable relationships between transformational leadership, job crafting, flourishing at work and in-role performance.

Regression analysis was run to evaluate the proposed relationships. Essentially, such analysis fits a linear model to the sample data to predict values of the dependent variable. To evaluate the extent to which one theoretical dimension explains a significant proportion of variance in another theoretical dimension, adjusted R-square values were computed. Thus, R^2 indicates the substantive size of the model's fit (Field, 2013), thereby allowing for the examination of research propositions based on comparable information. Thus, an R^2 value greater than .5 demonstrates a large proportion of variance explained by independent variables.

3.9 Conclusion

This chapter described the research design for the study and the supporting methodology that was utilised to address the research question. Using chapter 2 as a foundation, a theoretical model was constructed, which provides a graphical depiction of the relationships under investigation for the research study. To address the research aims, a quantitative methodology

was chosen to collect the data. Furthermore, a non-probability sampling technique was applied to ensure the group included in the study was adequate.

The researcher collected quantitative data from employees within the IT divisions of the public sector and technology and e-commerce organisations in South Africa. The data were collected using a self-administered, web-based format survey. Employees completed a questionnaire consisting of items, which elicited respondents' answers on the main measuring instruments that were used in the present study. During the various stages of the research and data collection process, appropriate measures were taken to ensure respondents' anonymity and guaranteed confidentiality of the feedback they provided. The following chapter (chapter 4) will report the results of the data analysis process.

Chapter 4: Reporting of results

This chapter provides an overview of statistical techniques employed to analyse the collected data and assess the research propositions within three phases of data analysis. During the first phase, the reliability of the measuring instruments was analysed. For the second phase, an overview was given of descriptive statistics to describe the composition of the research sample, after which problematic values were removed that emerged during phase 1 of the data analysis. Finally, phase 3 entailed inferential testing to prove or disprove the study's research propositions by using regression analysis.

4.1 Introduction

In the previous chapter (chapter 3) an overview was given of the proposed study and design of the research. Biographic as well as demographic information of the sample were provided by classifying respondents in terms of gender, age, ethnicity, the highest level of education, employment type and tenure in the current position within the organisation. Chapter 3 also indicated the advantages and limitations of web-based surveys to measure the research variables. Finally, the methods were described that were used for statistical analysis on the research data and to evaluate the proposed relationships between variables.

Chapter 4 evaluates and describes the findings of the statistical analyses done on the survey responses for the present research. Furthermore, this chapter outlines the three phases of data analysis. The first phase determines the reliability of the measuring instruments. The second phase provides a comprehensive description of the basic attributes of the measuring instruments. Finally, in the third phase, to assess the proposed relationships, inferential testing was done through regression analysis to process the research data. The chapter concludes with an explanation of the results to accept or reject the research propositions presented in the study.

4.2 Phase 1: Reliability of the instruments

4.2.1 Reliability of the measuring model

To determine the reliability of each measuring instrument, Cronbach's alpha coefficients were calculated to ascertain the internal consistency of the scales.

4.2.1.1 Reliability of the Transformational Leadership subscale of the Multifactor Leadership Questionnaire Form 5X-Short

The original Transformational Leadership subscale consisted of 20 items assigned to four dimensions. Cronbach's alpha coefficients of each dimension of the Transformational Leadership subscales are indicated in Table 4.1.

Table 4.1

Internal Consistency Assessment: Transformational Leadership Dimensions

Dimension	Cronbach's alpha (α)	Number of items
Idealised influence	.945	8
Inspirational motivation	.943	4
Individualised consideration	.918	4
Intellectual stimulation	.933	4
Transformational leadership	.977	20

The four dimensions of the Transformational leadership model show satisfactory reliability at .945 (idealised influence); .943 (inspirational motivation); .918 (individualised consideration); and .933 (intellectual stimulation). The high internal reliability scores of each dimension indicates excellent internal consistency.

4.2.1.2 Reliability of the Job Crafting Scale dimensions

Four dimensions represented the original JCS. These are: increasing structural job resources (5 items); decreasing hindering job demands (6 items); increasing social job resources (5 items); and increasing challenging job demands (5 items). Cronbach's alpha coefficients for each of the JCS dimensions are shown in Table 4.2.

Table 4.2

Internal Consistency Assessment: Job Crafting Dimensions

Dimension	Cronbach's alpha (α)	Number of items
Increasing structural job resources	.834	5
Decreasing hindering job demands	.879	6
Increasing social job resources	.844	5
Increasing challenging job demands	.836	5

Each of the four dimensions of job crafting indicated acceptable reliability, ranging between .834 and .879. Thus, the scale indicated good internal consistency (Pallant, 2013).

4.2.1.3 Reliability of the Flourishing-at-work Scale Short Form and its dimensions

Flourishing at work was assessed using the 17 items of the original FAWS-SF. The items were grouped into three separate dimensions linked to flourishing at work, as indicated in Table 4.3 below.

Table 4.3

Internal Consistency Assessment: Flourishing-at-Work Scale Short Form and Supporting Dimensions

Dimension	Cronbach's alpha (α)	Number of items
Emotional well-being	.804	3
Psychological well-being	.909	9
Social well-being	.890	5
Flourishing at work	.908	17

From the table above is it clear that these categories link to emotional well-being (α = .804); psychological well-being (α = .909); and social well-being (α= .890). Cronbach's alpha was also calculated for the total flourishing-at-work score. As indicated, the scale can be applied as

uni-dimensional. The uni-dimensional flourishing-at-work scale demonstrates excellent internal consistency (α = .908).

4.2.1.4 Reliability of the In-role Behaviour Scale

The original In-role Behaviour Scale measurement model comprised seven items related to task performance. After the reliability analysis was completed for the public sector and technology and e-commerce industry sample, a Cronbach's alpha value of .786 was indicated, as evident in Table 4.4.

Table 4.4

Internal consistency assessment: In-role Behaviour Scale

Dimension	Cronbach's alpha (α)	Number of items
Task performance	.786	7

Item-total statistics were used to determine whether the reliability of the scale could be improved by deleting items. Cronbach's alpha reliability could be improved by removing task performance item 6 and task performance item 7.

An acceptable Cronbach's alpha of .823 was found for the new five-item In-role Behaviour Scale. Therefore, the scale was deemed to have acceptable internal reliability.

Table 4.5

Revised Internal Consistency Assessment: In-Role Behaviour Scale

Dimension	Cronbach's alpha (α)	Number of items
Task performance	.823	5

4.3 Phase 2: Descriptive statistics

The descriptive statistics for the various scales utilised in the present research are described in the following sections of phase 2. Trochim (2011) notes that descriptive statistics essentially describe what the study data represent. The features of the data are defined by providing synopses of the research sample and measures. McCarthy, McCarthy, Ceccucci and Halawi

(2019) point out that descriptive statistics are essential to understand data as presented in a manner that is meaningful to prepare for other phases of analysis.

4.3.1 Descriptive statistics of the Transformational Leadership subscale dimensions

The descriptive statistics for the sample responses were determined for the Transformational leadership dimensions (i.e. idealised influence, inspirational motivation, individualised consideration and intellectual stimulation). The descriptive results are indicated in Table 4.6.

Table 4.6

Summary Descriptive Statistics for Scores on the Transformational Leadership Subscale and its Dimensions

Dimension	Min	Max	M	SD	Skew	Kurt
Idealised influence	1.00	5.00	3.65	1.02	-.899	.321
Inspirational motivation	1.00	5.00	3.60	1.13	-.850	-.102
Intellectual stimulation	1.00	5.00	3.52	1.13	-.608	-.333
Individualised consideration	1.00	5.00	3.47	1.15	-.630	-.497
Transformational Leadership	4.00	20.00	3.56	4.14	-.763	.003

Note. M = Mean; SD = Standard deviation; Skew = Skewness; Kurt = Kurtosis.

As indicated by the descriptive statistics in Table 4.6, each of the transformational leadership dimensions shows negative skewness scores, thus indicating that survey respondents were inclined to choose scores at the higher end of each dimension. However, the scores are within the -1 to 1 bound, and thus do not indicate deviation from normality. The mean (M) values support this result as scores range between 3.47 and 3.65 on the five-point Likert scale. Therefore, respondents at times often felt their leaders display behaviours of idealised influence, inspirational motivation, intellectual stimulation and individualised consideration.

4.3.2 Descriptive statistics of the Job Crafting Scale dimensions

The job crafting dimensions' descriptive statistics were computed for the questionnaire responses. Table 4.7 summarises these statistics.

Table 4.7

Summary Descriptive Statistics for Scores on the Job Crafting Scale and its Dimensions

Dimension	Min	Max	M	SD	Skew	Kurt
Increasing structural job resources	1.00	5.00	4.03	.70	-.806	1.266
Decreasing hindering job demands	1.00	5.00	2.84	.94	-.571	-.128
Increasing social job resources	1.00	5.00	2.77	.92	-.654	-.049
Increasing challenging job resources	1.00	5.00	3.46	.82	-.284	-.156

Note. M = Mean; SD = Standard deviation; Skew = Skewness; Kurt = Kurtosis.

According to Table 4.7, each of the job crafting dimensions indicated negative skewness scores. This shows that respondents veered toward choosing scores at the higher end of the five-point Likert scale. This is particularly true for increasing challenging job resources (M = 3.46) and increasing structural job resources (M = 4.03), indicating that they regularly to often engage in these behaviours.

4.3.3 Descriptive statistics of the Flourishing-at-Work Scale Short Form dimensions

The three dimensions of well-being (i.e. emotional, psychological and social) of the FAWS-SF were used to determine the descriptive statistics for the sample responses. The results are indicated in Table 4.8.

Table 4.8

Summary Descriptive Statistics for Scores on the Flourishing-at-Work Scale Short Form and its Dimensions

Dimension	Min	Max	M	SD	Skew	Kurt
Emotional well-being	1.00	6.00	4.12	1.11	-.527	-.046
Psychological well-being	1.00	6.00	4.36	1.00	-.880	1.097
Social well-being	1.00	6.00	3.79	1.26	-.219	-.694
Flourishing-at-Work	3.00	6.00	4.09	3.10	-.544	.060

Note. M = Mean; SD = Standard deviation; Skew = Skewness; Kurt = Kurtosis.

The data in Table 4.8 indicate that the survey respondents tended to select rating scores at the higher end of the FAWS-SF, which is demonstrated by the negative skewness of the distribution for each dimension. Overall, the descriptive statistics for flourishing at work indicate a negatively skewed, lower peaked distribution; with more scores at the higher end of the distribution as opposed to a normal one. Therefore, respondents experienced social well-being (M = 3.79) once a week to about 2 or 3 times a week, while emotional well-being (M = 4.12) and psychological well-being (4.36) were experienced about 2 or 3 times a week to almost every day.

4.3.4 Descriptive statistics of the In-role Behaviour Scale and its dimension

Descriptive statistics for the sample responses were reported based on the revised five-item In-role Behaviour Scale, after the removal of items which reduced the scales' internal consistency. Thus, the findings were founded on the In-role Behaviour dimension with an acceptable reliability coefficient of (α = .823). The descriptive results are indicated in Table 4.9.

Table 4.9

Summary Descriptive Statistics for Scores on the In-Role Behaviour Scale and Dimensions

Dimension	Min	Max	M	SD	Skew	Kurt
Task Performance	1.00	5.00	4.35	.59	-1.46	5.733

Note. M = Mean; SD = Standard deviation; Skew = Skewness; Kurt = Kurtosis.

The negative skewness score for the task performance dimension (-1.46) shows a grouping of scores at the higher end of the scale – implying that respondents were inclined to score toward the higher end of the scale. Based on the five-point Likert scale used to evaluate task performance, with a midpoint of 3, the mean score (M = 4.35) demonstrates that respondents rated themselves high (agreed to strongly disagree with statements) on their task performance, thus supporting the skewness score. Thus, the descriptive statistics scores for items of task performance shows a negatively skewed, higher peaked distribution, indicating more scores at the higher end of the distribution than a normal one. This finding is consistent with other studies, which found that individuals generally rate themselves high on performance (Breevaart et al., 2015; Chughtai, 2008; Redelinghuys et al., 2018).

4.4 Phase 3: Inferential testing

The results of the statistical analyses done to achieve the empirical aims of the research are presented in the current section. As such, the statistical results were interpreted according to the propositions described in Section 3.3 of the dissertation.

Proposition 1a	Transformational leadership dimensions explain a significant proportion of the variance in increasing structural resources.

Proposition 1a aimed to evaluate the extent to which transformational leadership dimensions (i.e. idealised influence, inspirational motivation, individualised consideration and intellectual stimulation) explain a significant proportion of the variance in increasing structural resources as a dimension of job crafting. Table 4.10 presents the results generated after multiple linear regression analysis, with increasing structural resources serving as the dependent variable.

Table 4.10

Results of Multiple Linear Regression Analysis Between Transformational Leadership Dimensions and Increasing Structural Resources

Model Summary				
Model	R	R square	Adjusted R square	Std. error of estimate
1	.433[a]	.188	.167	.642

[a]*Predictors*: Intellectual Stimulation; Inspirational Motivation; Individualised Consideration; Idealised Influence.

ANOVA[a]						
	Model	Sum of squares	df	Mean square	F	Sig.
1	Regression	15.124	4	3.781	9.184	.000[b]
	Residual	65.458	159	.412		
	Total	80.582	163			

[a]*Dependent Variable*: Increasing Structural Resources. [b]Intellectual Stimulation; Inspirational Motivation; Individualised Consideration; Idealised Influence.

Coefficients[a]						
		Unstandardised coefficients		Standardised coefficients		
	Model	B	Std. Error	Beta	t	Sig.
1	(Constant)	3.046	.187		16.329	.000
	Idealised influence	.054	.124	.079	.436	.663
	Inspirational motivation	-.035	.088	-.057	-.400	.690
	Individualised consideration	.104	.093	.171	1.117	.266
	Intellectual stimulation	.157	.099	.252	1.587	.114

[a]*F(4,159) = 9.184; p < .01, Std error of estimate = .642.*

Table 4.10 presents the multiple linear regression analysis done with increasing structural resources as the dependent variable, and idealised influence, inspirational motivation, individualised consideration and intellectual stimulation as independent variables. The multiple

regression analysis revealed a $F(4,159) = 9.184$, $p < .01$, $R^2 = .188$. Idealised influence, inspirational motivation, individualised consideration and intellectual stimulation explain 18.8% of the variance observed in increasing structural resources. Thus, the results indicate that the four independent variables together statistically and significantly predict increasing structural resources.

Furthermore, it was found that idealised influence (β = .079), inspirational motivation (β = .-.057), individualised consideration (β = .171) and intellectual stimulation (β = .252) did not make a statistically significant contribution to the variance in increasing structural resources as individual dimensions, at either the .01 or .05 level. However, the total model was found to be significant. Based on the results, it can be concluded that proposition 1a is accepted.

Proposition 1b	Transformational leadership dimensions explain a significant proportion of the variance in decreasing hindering job demands.

The purpose of proposition 1b was to assess the extent to which transformational leadership dimensions (i.e. idealised influence, inspirational motivation, individualised consideration and intellectual stimulation) explain a significant proportion of the variance in decreasing hindering job demands. The results of the multiple regression analysis, with hindering job demands as the dependent variable, are presented in Table 4.11.

Table 4.11

Results of Multiple Linear Regression Analysis Between Transformational Leadership Dimensions and Decreasing Hindering Job Demands

Model summary				
Model	R	R square	Adjusted R square	Std. error of estimate
1	.212[a]	.045	.021	.927

[a]*Predictors*: Intellectual Stimulation; Inspirational Motivation; Individualised Consideration; Idealised Influence.

ANOVA[a]

	Model	Sum of squares	df	Mean square	F	Sig.
1	Regression	6.424	4	1.606	1.867	.119[b]
	Residual	136.756	159	.860		
	Total	143.181	163			

[a]*Dependent Variable*: Decreasing Hindering Job Demands. [b] Predictors: Intellectual Stimulation; Inspirational Motivation; Individualised Consideration; Idealised Influence.

Coefficients[a]

Model		Unstandardised coefficients		Standardised coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.322	.270		8.611	.000
	Idealised influence	-.012	.179	-.013	-.065	.948
	Inspirational motivation	-.086	.127	-.104	-.677	.499
	Individualised consideration	.029	.135	.036	.214	.830
	Intellectual stimulation	.219	.143	.264	1.530	.128

[a]*F(4,159) = 1.867; p < .01, Std error of estimate = .927.*

Table 4.11 summarises the results of the multiple linear regression analysis with decreasing hindering job demands as the dependent variable, and the following as independent variables: idealised influence, inspirational motivation, individualised consideration and intellectual stimulation. The multiple regression analysis did not show a significant result with $F(4,159) = 1.867$, $p < .01$, $R^2 = .045$.

It was found that idealised influence (β = -.013), inspirational motivation (β = -.104), individualised consideration (β = .036) and intellectual stimulation (β = .264) do not make a statistically significant contribution to the variance in decreasing hindering job demands at either the .01 or .05 levels. Thus, proposition 1b is rejected.

Proposition 1c	Transformational leadership dimensions explain a significant proportion of the variance relationship in increasing social job resources.

For proposition 1c, the aim was to ascertain whether transformational leadership dimensions (i.e. idealised influence, inspirational motivation, individualised consideration and intellectual stimulation) explain a significant proportion of the variance in increasing social job resources. With increasing social job resources as the dependent variable, the results of multiple linear regression analysis are presented in Table 4.12.

Table 4.12

Results of Multiple Linear Regression Analysis Between Transformational Leadership Dimensions and Increasing Social Job Resources

Model summary

Model	R	R square	Adjusted R square	Std. error of estimate
1	.547[a]	.299	.282	.780

[a]*Predictors*: Intellectual Stimulation; Inspirational Motivation; Individualised Consideration; Idealised Influence.

ANOVA[a]

	Model	Sum of squares	df	Mean square	F	Sig.
1	Regression	41.329	4	10.332	16.990	.000[b]
	Residual	96.693	159	.608		
	Total	138.022	163			

[a]*Dependent Variable*: Increasing Social Job Resources. [b] *Predictors*: Intellectual Stimulation; Inspirational Motivation; Individualised Consideration; Idealised Influence.

Coefficients[a]						
		Unstandardised coefficients		Standardised coefficients		
	Model	B	Std. Error	Beta	t	Sig.
1	(Constant)	1.087	.227		4.795	.000
	Idealised influence	.013	.150	.014	.085	.932
	Inspirational motivation	.135	.107	.167	1.269	.206
	Individualised consideration	.156	.114	.195	1.375	.171
	Intellectual stimulation	.171	.120	.210	1.424	.156

[a]*F(4,159) = 16.990; p < .01, Std error of estimate = .780.*

Table 4.12 presents the results of the multiple linear regression analysis with increasing social job resources as the dependent variable, and idealised influence, inspirational motivation, individualised consideration and intellectual stimulation as independent variables. This multiple regression analysis yielded a significant result: $F(4,159) = 16.990$, $p < .01$, $R^2 = .299$. This result shows that transformational leadership dimensions account for 29.9% of the variance shown in increasing social job resources.

The beta coefficient values indicate that idealised influence (β = -.014), inspirational motivation (β = -.167), individualised consideration (β = .195) and intellectual stimulation (β = .210) make no significant contribution to the variance in increasing challenging job demands at the .01 or .05 levels. Based on the results of the total model, proposition 1c is thus accepted

Proposition 1d	Transformational leadership explains a significant proportion of the variance in increasing challenging job demands.

Proposition 1d aimed to evaluate whether and to what extent transformational leadership dimensions (i.e. idealised influence, inspirational motivation, individualised consideration and intellectual stimulation) explain the variance in increasing challenging job demands. The results of the multiple linear regression analysis, with increasing challenging job demands as the dependent variable, are presented in Table 4.13.

Table 4.13

Results of Multiple Linear Regression Analysis Between Transformational Leadership Dimensions and Increasing Challenging Job Demands

Model summary				
Model	R	R square	Adjusted R square	Std. error of estimate
1	.360[a]	.130	.108	.775

[a]*Predictors*: Intellectual Stimulation; Inspirational Motivation; Individualised Consideration; Idealised Influence.

ANOVA[a]						
	Model	Sum of squares	df	Mean square	F	Sig.
1	Regression	14.243	4	3.561	5.928	.000[b]
	Residual	95.512	159	.601		
	Total	109.755	163			

[a]*Dependent Variable*: Increasing challenging job demands. [b]*Predictors*: Intellectual Stimulation; Inspirational Motivation; Individualised Consideration; Idealised Influence.

Coefficients[a]						
		Unstandardised coefficients		Standardised coefficients		
	Model	B	Std. error	Beta	t	Sig.
1	(Constant)	2.500	.225		11.095	.000
	Idealised influence	-.006	.149	-.007	-.037	.971
	Inspirational motivation	.048	.106	.067	.457	.648
	Individualised consideration	.125	.113	.176	1.110	.269
	Intellectual stimulation	.107	.120	.146	.890	.375

[a]*F(4,159) = 5.928 ; p < .01, Std error of estimate = .775*.

Table 4.13 provides the results of the multiple linear regression analysis with increasing challenging job demands as the dependent variable and transformational leadership dimensions (i.e. idealised influence, inspirational motivation, individualised consideration and intellectual stimulation) as independent variables. The results of the multiple linear regression analysis

showed a significant result: $F(4,159) = 5.928$, $p < .01$, $R^2 = .130$. Thus, the four independent variables (i.e. intellectual stimulation, inspirational motivation, individualised consideration and idealised influence) together explain 13% of the variance observed in increasing challenging job demands.

The value of the beta coefficients evident in Table 4.13 indicates that, individually, idealised influence (β = -.007), inspirational motivation (β = .067), individualised consideration (β = .176) and intellectual stimulation (β = .146) does not make a significant contribution to the variance observed in challenging job demands at the .01 or .05 level. However, the total model is statistically significant. Based on the total model, proposition 1d is accepted.

Proposition 2	Transformational leadership dimensions explain a significant proportion of the variance in flourishing at work.

Proposition 2 aimed to determine whether transformational leadership dimensions (i.e. idealised influence, inspirational motivation, individualised motivation and intellectual stimulation) significantly explain the variance in flourishing at work. The results of the multiple linear regression analysis, with flourishing at work as the dependent variable, are presented in Table 4.14.

Table 4.14.

Results of Multiple Linear Regression Analysis Between Transformational Leadership Dimensions and Flourishing at Work

Model summary				
Model	R	R square	Adjusted R square	Std. error of estimate
1	.548[a]	.301	.283	2.62179

[a]*Predictors*: Intellectual Stimulation; Inspirational Motivation; Individualised Consideration; Idealised Influence.

ANOVA[a]						
	Model	Sum of squares	df	Mean square	F	Sig.
1	Regression	470.018	4	117.504	17.095	.000[b]
	Residual	1092.930	159	6.874		
	Total	1562.948	163			

[a]*Dependent Variable*: Flourishing at Work. [b]*Predictors:* Intellectual Stimulation; Inspirational Motivation; Individualised Consideration; Idealised Influence.

Coefficients[a]						
		Unstandardised coefficients		Standardised coefficients		
	Model	B	Std. error	Beta	t	Sig.
1	(Constant)	6.630	.762		8.698	.000
	Idealised influence	.128	.506	.042	.253	.801
	Inspirational motivation	1.112	.358	.408	3.103	.002
	Individualised consideration	.309	.382	.115	.811	.419
	Intellectual stimulation	.029	.405	.011	.072	.942

[a]*F(4,159) = 17.095; p < .01, Std error of estimate = 2.62179.*

Table 4.14 summarises results of the simple linear regression analysis, with flourishing at work as the dependent variable, and transformational leadership dimensions (i.e. idealised influence, inspirational motivation, individualised consideration and intellectual stimulation) as the independent variable. The simple linear regression analysis yielded a significant regression equation of $F(4,159) = 17.095$, $p < .01$, $R^2 = .301$. It can thus be interpreted that the four transformational leadership dimensions as the independent variable accounts for 30.1% of the variance observed in flourishing at work.

Moreover, the beta coefficient value indicates that inspirational motivation (β = .408) makes a significant contribution to the variance in flourishing at work at the .01 level. Conversely, the beta coefficients for idealised influence (β = .042), individualised consideration (β = .115) and intellectual stimulation (β = .011) do not contribute statistically significantly to the variance

observed in flourishing at work at the .01 or .05 level. Based on the results of the total model, proposition 2 is accepted.

Proposition 3	Transformational leadership dimensions explain a significant proportion of the variance in in-role performance.

The aim of proposition 3 was to determine whether and to what extent transformational leadership dimensions (i.e. idealised influence, inspirational motivation, individualised consideration and intellectual stimulation) explain the variance in in-role performance. The results of multiple linear regression analysis, with in-role performance as the dependent variable, are presented in Table 4.15.

Table 4.15

Results of Multiple Linear Regression Analysis Between Transformational Leadership Dimensions and In-Role Performance

Model summary

Model	R	R square	Adjusted R square	Std. error of estimate
1	.301[a]	.090	.067	.566

a. *Predictors*: Intellectual Stimulation; Inspirational Motivation; Individualised Consideration; Idealised Influence.

ANOVA[a]

	Model	Sum of squares	df	Mean square	F	Sig.
1	Regression	5.030	4	1.257	3.928	.005[b]
	Residual	50.578	158	.320		
	Total	55.607	162			

[a]*Dependent Variable*: In-Role Performance. [b] *Predictors*: Intellectual Stimulation; Inspirational Motivation; Individualised Consideration; Idealised Influence.

Coefficients[a]						
		Unstandardised coefficients		Standardised coefficients		
Model		B	Std. error	Beta	t	Sig.
1	(Constant)	3.795	.165		23.064	.000
	Idealised influence	.083	.109	.146	.763	.447
	Inspirational motivation	.133	.077	.258	1.718	.088
	Individualised consideration	.033	.082	.065	.397	.692
	Intellectual stimulation	-.096	.087	-.186	-1.104	.271

[a]*F(4,158) = 3.928; p < .05, Std error of estimate = .566.*

Table 4.15 presents the results of the multiple linear regression analysis done with in-role performance as the dependent variable and idealised influence, inspirational motivation, individualised consideration and intellectual stimulation as independent variables. This multiple regression analysis showed a significant result: $F(4,158) = 3.928$, $p < .01$, $R^2 = .090$. This result demonstrates that the four independent variables (i.e. idealised influence, inspirational motivation, individualised consideration and intellectual stimulation) together explain 9% of the variance observed in in-role performance.

Table 4.15 shows beta coefficient values, which suggest that none of the transformational leadership dimensions, individually, makes significant contributions to explain the variance in in-role performance, including idealised influence (β = .146), inspirational motivation (β = .258), individualised consideration (.397) and intellectual stimulation (β = -1.104) at the .01 or .05 levels. However, based on the results of the total model, proposition 3 is accepted.

Proposition 4	Job crafting dimensions explain a significant proportion of the variance in flourishing at work.

The aim of proposition 4 was to assess whether job crafting dimensions (i.e. increasing social job resources, decreasing hindering job demands, increasing structural job resources and increasing challenging job demands) significantly explain the variance in flourishing at work. The results of the multiple linear regression analysis, with flourishing at work as the dependent variable, are presented in Table 4.16.

Table 4.16

Results of Multiple Linear Regression Analysis Between Job Crafting Dimensions and Flourishing-at-Work

Model summary

Model	R	R square	Adjusted R square	Std. error of estimate
1	.547[a]	.299	.282	2.62418

[a]*Predictors*: Increasing Challenging Job Demands; Decreasing Hindering Job Demands; Increasing Social Job Resources; Increasing Structural Job Resources.

ANOVA[a]

Model		Sum of squares	df	Mean square	F	Sig.
1	Regression	468.019	4	117.005	16.991	.000[b]
	Residual	1094.928	159	6.886		
	Total	1562.948	163			

[a]*Dependent Variable*: Flourishing at Work. [b]*Predictors*: Increasing Challenging Job Demands; Decreasing Hindering Job Demands; Increasing Social Job Resources; Increasing Structural Job Resource.

Coefficients[a]						
		Unstandardised coefficients		Standardised coefficients		
	Model	B	Std. error	Beta	t	Sig.
1	(Constant)	3.959	1.244		3.183	.002
	Increasing social job resources	1.064	.403	.242	2.640	.009
	Decreasing hindering job demands	-.259	.249	-.078	-1.038	.301
	Increasing structural job resources	1.000	.297	.297	3.366	.001
	Increasing challenging job demands	.576	.384	.153	1.498	.136

[a]*F(4,159) = 16.991; p < .05, Std error of estimate = 2.62418.*

Table 4.16 outlines the results of the multiple linear regression analysis with flourishing at work as the dependent variable, and job crafting dimensions (i.e. increasing social job resources, decreasing hindering job demands, increasing structural job resources and increasing challenging job demands) as independent variables. The calculations of the multiple linear regression analysis produced a significant result: $F(4,159) = 16.991$, $p < .01$, $R^2 = .299$. The four independent variables (i.e. increasing social job resources, decreasing hindering job demands, increasing structural job resources and increasing challenging job demands) together explain 29.9% of the variance observed in flourishing at work.

The value of the beta coefficients evident in Table 4.16 indicates that increasing social job resources (β = .242) and increasing structural job resources (β = .297) contributes significantly to the variance observed in flourishing at work at the .01 level. Moreover, decreasing hindering job demands (β = -.078), and increasing challenging job demands (β = .153) makes no significant contribution to the variance observed in flourishing at work at the .01 or .05 level. Based on the results of the total model, proposition 4 is accepted.

Proposition 5	Job crafting dimensions explain a significant proportion of the variance in in-role performance.

The aim of proposition 5 was to assess the extent to which the above-mentioned job crafting dimensions explain a significant proportion of the variance in in-role performance. The results of the multiple linear regression analysis, with in-role performance as the dependent variable, are shown in Table 4.17.

Table 4.17

Results of Multiple Linear Regression Analysis Between Job Crafting Dimensions and In-Role Performance

Model summary

Model	R	R square	Adjusted R square	Std. error of estimate
1	.464[a]	.216	.196	.525

[a]*Predictors*: Increasing challenging job demands, Decreasing hindering job demands, Increasing structural job resources, Increasing social job resources

ANOVA[a]

Model		Sum of squares	df	Mean square	F	Sig.
1	Regression	11.984	4	2.996	10.852	.000[b]
	Residual	43.623	158	.276		
	Total	55.607	162			

[a]*Dependent Variable*: In-Role Performance. [b] Increasing Challenging Job Demands; Decreasing Hindering Job Demands; Increasing Structural Job Resources; Increasing Social Job Resources.

Coefficients[a]						
		Unstandardised coefficients		Standardised coefficients		
	Model	B	Std. error	Beta	t	Sig.
1	(Constant)	2.731	.249		10.947	.000
	Increasing social job resources	.304	.081	.366	3.760	.000
	Decreasing hindering job demands	.079	.050	.126	1.578	.117
	Increasing structural job resources	.005	.060	.008	.082	.935
	Increasing challenging job demands	.045	.077	.063	.581	.562

[a]*F(4,158) = 10.852 ; p < .01, Std error of estimate = .525.*

Table 4.17 outlines the results of the multiple linear regression analysis with in-role performance as the dependent variable, and the following independent variables: increasing social job resources, decreasing hindering job demands, increasing structural job resources and increasing challenging job demands. The multiple regression analysis indicated a significant result: $F(4,158) = 10.852$, $p < .01$, $R^2 = .216$. The result shows that the four predictors (i.e. increasing social job resources, decreasing hindering job demands, increasing structural job resources, and increasing challenging job demands) together explain 21.6% of the variance observed in in-role performance.

It was found that increasing social job resources ($\beta = .366$, $p < .01$) explain the largest proportion of the variance in in-role performance. Furthermore, decreasing hindering job demands ($\beta = .126$), increasing structural job resources ($\beta = .008$), and increasing challenging job demands ($\beta = .063$) do not make a statistically significant contribution to in-role performance at either the .01 or .05 levels. Based on the total model, proposition 5 is accepted.

Proposition 6	Flourishing at work explains a significant proportion of the variance in in-role performance.

For proposition 6, the purpose was to determine whether flourishing at work significantly explains the variance in in-role performance. The results of the multiple linear regression analysis, with flourishing at work as the independent variable and in-role performance as the dependent variable, are presented in Table 4.18. Flourishing at work is used as a total score in the present study, as the variable can function as a second-order factor (Rautenbach & Rothmann, 2017b).

Table 4.18

Results of Multiple Linear Regression Analysis Between Flourishing at Work Dimensions and In-Role Performance

Model summary

Model	R	R square	Adjusted R square	Std. error of estimate
1	.379[a]	.144	.138	.544

[a]*Predictors*: Flourishing at Work.

ANOVA[a]

Model		Sum of squares	df	Mean square	F	Sig.
1	Regression	7.991	1	7.991	27.020	.000[b]
	Residual	47.616	161	.296		
	Total	55.607	162			

[a]*Dependent variable*: In-Role Performance. [b] *Predictors*: Flourishing at Work.

Table 4.18 shows the results of the simple linear regression analysis with flourishing at work as the dependent variable and in-role performance as the independent variable. This specific simple regression analysis produced a significant regression equation of $F(1,161) = 27.020$, $p < .01$ with an $R^2 = .144$. The result indicates that flourishing at work accounts for 14.4% of the variance shown in in-role performance. Thus, proposition 6 is accepted.

An additional multiple linear regression analysis (Table 4.19) was done to determine whether the flourishing-at-work dimensions, individually, explain a significant proportion of the

variance in in-role performance, The results of the analysis, with in-role performance being the dependent variable, are provided in Table 4.19.

Table 4.19

Results Of Multiple Linear Regression Analysis Between Flourishing at Work Dimensions And In-Role Performance

Model summary

Model	R	R square	Adjusted R square	Std. error of estimate
1	.416[a]	.173	.157	.538

[a]*Predictors*: Emotional Well-Being; Psychological Well-Being; Social Well-Being.

ANOVA[a]

Model		Sum of squares	df	Mean square	F	Sig.
1	Regression	9.621	3	3.207	11.089	.000[b]
	Residual	45.986	159	.289		
	Total	55.607	162			

[a]*Dependent Variable*: In-Role Performance. [b] *Predictors*: Emotional Well-Being; Psychological Well-Being; Social Well-Being.

Coefficients[a]

Model		Unstandardised coefficients		Standardised coefficients		
		B	Std. error	Beta	t	Sig.
1	(Constant)	3.300	.193		17.141	.000
	Emotional well-being	-.021	.066	-.041	-.326	.745
	Psychological well-being	.254	.078	.432	3.256	.001
	Social well-being	.009	.056	.020	.164	.870

[a]*F(3,159) = 11.089; p < .05, Std error of estimate = .538.*

Table 4.19 summarises the results from the multiple linear regression analysis with in-role performance as the dependent variable, and the following flourishing-at-work dimensions as independent variables: emotional well-being, social well-being, and psychological well-being. The results shown for the multiple linear regression analysis are significant: ($F(3,159) = 11.089$; $p < .01$, $R^2 = .173$). The three independent variables (i.e. emotional, social, and psychological well-being) together explain 17.3% of the variance observed in in-role performance.

The value of the beta coefficients shown in Table 4.19 demonstrates that emotional well-being ($\beta = -.021$) and social well-being ($\beta = .009$) makes no significant contribution to the variance observed in flourishing at work at the .01 or .05 level. Furthermore, psychological well-being ($\beta = .254$) contributes significantly to the variance observed in in-role performance at the .01 level.

4.5 Conclusion

The aim of Chapter 4 was to describe the statistical findings for the several forms of analysis conducted in the present research as well as to link the stated results and propositions to answer the study's research questions. Three broad phases informed the statistical evaluations and methods of data transformation. Firstly, after identifying and eliminating problematic scale items, reliability analyses were done to determine whether measuring instruments would result in consistent outcomes when applied repeatedly. Secondly, the descriptive data were summarised for each of the four measuring instruments used in the research. The purpose of this summary was to present a synopsis of the measures used and responses gathered for the research study. Thirdly, the research data were explained by translating the inferential statistics.

Five of the six propositions posited in the previous section of this chapter could be confirmed due to the evidence provided by the statistical analysis, thereby delivering notable findings, as indicated in Table 4.20.

Table 4.20

Summary of Proposition Testing

Number	Proposition	Result
1a	Transformational leadership dimensions explain a significant proportion of the variance in increasing structural resources.	Accepted
1b	Transformational leadership dimensions explain a significant proportion of the variance in decreasing hindering job demands.	Rejected
1c	Transformational leadership dimensions explain a significant proportion of the variance in increasing social job resources.	Accepted
1d	Transformational leadership dimensions explain a significant proportion of the variance in increasing challenging job demands.	Accepted
2	Transformational leadership dimensions explain a significant proportion of the variance in flourishing at work.	Accepted
3	Transformational leadership dimensions explain a significant proportion of the variance in in-role performance.	Accepted
4	Job crafting dimensions explain a significant proportion of the variance in in-role performance.	Accepted
5	Job crafting dimensions explain a significant proportion of the variance in in-role performance	Accepted
6	Flourishing at work dimensions explain a significant proportion of the variance in in-role performance	Accepted

The following chapter (chapter 5) will interpret significant findings derived from the study, together with surmised reasons for non-significant findings. This subsequent chapter will also describe the limitations of the present research and make recommendations for future research. Thereafter, recommendations will be discussed for management and possible practical interventions based on the implications of the research findings.

Chapter 5: Conclusion and recommendations

5.1 Introduction

In the previous chapters, the research problem was outlined, and objectives of the present research study described. Chapter 2 evaluated and reviewed academic literature on the theoretical constructs of transformational leadership, job crafting, flourishing at work, and in-role performance as variables under investigation. Furthermore, the relationships between variables were examined to identify possible associations among and impact of a transformational leadership style on the level of job crafting, flourishing at work, and in-role performance of employees in the public sector and technology and e-commerce organisations in South Africa. Chapter 3 discussed the research design as well as the methodology used to evaluate the research propositions that were developed from the literature review on the main study variables. Chapter 4 presented and discussed the outcomes of statistical analyses conducted on the study variables to answer the proposed research questions. Thereafter, inferences were made on the viability of the research propositions.

This chapter discusses the most notable results derived from the study as related to the appropriate and existing scholarly works presented in preceding chapters. Furthermore, possible limitations of the present research are discussed out and recommendations made for future research. Finally, the managerial impact of the research findings is pointed out, and recommendations provided for practical interventions that organisations could implement.

5.2 Summary of the findings

The purpose of this research study was to gain an understanding of the impact that transformational leadership and job crafting have on flourishing at work and in-role performance of IT professionals in the public sector and technology and e-commerce organisations in South Africa. By analysing the research data, the relationships between dimensions of transformational leadership, job crafting, flourishing at work, and in-role performance were investigated for the mentioned sample of IT professionals. The review of the research findings discussed below could help organisations develop proposed guidelines to manage IT professionals in public and e-commerce organisations in key areas. These areas include leadership training, defining ways of working, as well as initiatives for employees' well-being, and performance.

5.2.1 Reliability of the instruments

Reliability analysis was done to determine whether each of the measuring instruments used to evaluate the constructs in this study was reliable for use in the present sample.

5.2.1.1 Reliability of the Transformational Leadership subscale

To assess employees' perceptions of their supervisors' transformational leadership behaviour, the Transformational leadership subscale of the Multifactor Leadership Questionnaire MLQ-Form 5X-Short was used (see Annexure C). Developed by Avolio and Bass (2004), the subscale consists of 20 items allocated to four dimensions, which provide a measurement of idealised influence (8 items), inspirational motivation (4 items), individualised consideration (4 items) and intellectual stimulation (4 items). The construct was assessed using a five-point Likert scale, ranging from 1 (not at all) to 5 (frequently, if not always).

The results of the reliability analysis demonstrated high Cronbach's alpha coefficients for each of the scale dimensions ranging from .918 to .945, while the total scale showed a score of .977, which indicates excellent internal consistency. This finding is in accordance with studies measuring transformational leadership in the South African population, for example, Engelbrecht and Samuel (2019), Theron, Krafft and Engelbrecht (2004) and Vrba (2007). Each of the 20 items in the Transformational Leadership subscale, therefore, measure the same construct (transformational leadership behaviour) and will provide consistent results when the scale is applied repeatedly. In this regard, the subscale's repeated application evaluates IT professionals' perceptions of the extent to which supervisors inspire commitment to a shared vision and goals, challenge innovative problem solving, strengthen capacity through coaching and mentoring, and encourage thinking (Bass & Riggio, 2006).

5.2.1.2 Reliability of the Job Crafting Scale

The original Job Crafting Scale (JCS) (see Annexure D) includes 21 individual items, thereby evaluating four underlying dimensions of job crafting, as developed by Tims et al. (2012). The JCS uses a five-point Likert scale ranging from 1 (never) to 5 (very often). These underlying dimensions are: increasing structural resources (5 items); increasing social job resources (5 items); increasing challenging job demands (5 items); and decreasing hindering job demands (6 items) (Tims et al., 2012).

The results of the reliability analysis showed high reliability and good internal consistency, with dimension scores ranging from .834 to .879. This finding confirms the suitability of the JCS to a South African sample, as indicated by several other studies (e.g. Bell & Njoli, 2016; De Beer et al., 2016; Koning, 2014; Peral & Geldenhuys, 2016; Vermooten, Boonzaier, & Kidd, 2019). Thus, the JCS provides consistent results on employees' self-perceptions about the following aspects: their ability to mobililse feedback and advice from others, engage in professional development, seek out challenging opportunities, and avoid stress resulting from work (Radstaak & Hennes, 2017; Tims et al., 2012).

5.2.1.3 Reliability of the Flourishing-at-Work Scale Short Form

The Flourishing-at-work Scale Short Form (FAWS-SF) (see Annexure E) is conceptualised as a three-dimensional construct by Rautenbach (2015). The 17-item scale measures three dimensions of well-being: emotional (3 items), psychological (9 items) and social (5 items), with ratings provided on a Likert scale of 1 (never) to 6 (every day).

The reliability analysis for the FAWS-SF showed acceptable internal consistency for the scale and its dimensions. Cronbach's alpha scores for the dimensions ranged between .804 and .890. Furthermore, the total scale also indicated high reliability and good internal consistency ($\alpha = .908$). The results of the study are in line with findings examining flourishing at work for South African samples (Redelinghuys et al., 2018; Redelinghuys et al., 2019). Based on the findings, it seems that the FAWS-SF items proved reliable to provide information on the subjective well-being of individuals within the work environment relating to emotional, physical and social well-being (Janse van Rensburg, Rothmann, & Diedericks, 2017).

5.2.1.4 Reliability of the In-role Behaviour Scale

Williams and Anderson's (1991) In-Role Behaviour scale (see Annexure F) was used to measure employees' in-role or task performance in this study. Seven items are included in the scale, ranging on a Likert scale of 1 (strongly disagree) to 5 (strongly agree). The seven-item scale showed low internal consistency ($\alpha = .786$) and further analysis was done to determine whether Cronbach's alpha score for the instrument could be improved after the removal of problematic items. Other studies have also indicated that items from the scale needed to be removed to improve reliability. Breevaart, Bakker, Demerouti, Sleebos and Maduro (2014) used four items of the scale after removing problematic items, Rich et al. (2010) employed five items of the scale, while Weseler and Niessen (2016) indicate they used six items of the mentioned scale to measure in-role performance.

After further analysis, the adapted in-role behaviour scale revealed good internal consistency and a high reliability score (α = .823) with the removal of reverse-scored items (i.e. task performance items 6 and 7). Thus, this redone scale proved to be a reliable measure of IT professionals' perceived task performance (Weseler & Niessen, 2016).

5.2.2 Interpreting the descriptive statistics

After confirming the reliability of the measuring instruments used in this study, an overview is given below of the descriptive statistics showing the basic features of the collected data.

5.2.2.1 Interpreting the transformational leadership scores

To measure IT employees' evaluations of their supervisors' transformational leadership, the study employed the Transformational Leadership subscale of the Multifactor Leadership Questionnaire (MLQ-Form 5X-Short) (Avolio & Bass, 2004). The Transformational Leadership subscale incorporates four dimensions (idealised influence, inspirational motivation, intellectual stimulation and individualised consideration), all contributing to transformational leadership behaviour. A five-point Likert scale, ranging from 1 (not at all) to 5 ("frequently, if not always"), was used to gather responses. There was no reverse scoring of the items included in the scale.

The 20-item scale assessed the extent to which a sample of employees within the IT divisions of the public sector and technology and e-commerce organisations perceived that their direct supervisor displayed traits of transformational leadership behaviour. Prior research does not provide set instructions to interpret scores in this regard. Therefore, mean scores (M) obtained for the present research were interpreted according to the descriptions provided by the Likert scale (i.e. 1 = not at all, 2 = once in a while, 3= sometimes, 4 = fairly often, 5 = frequently if not always). A mean score (M) of 3.56 (SD = 4.14) was revealed for the total Transformational Leadership subscale. For the present study, it is evident that IT professionals felt that in their organisations, supervisors sometimes to fairly often display aspects of transformational leadership behaviour.

Research indicates that under transformational leadership, employees behave proactively and are motivated and encouraged to find new ways of working (Breevaart et al., 2016). For transformational leadership dimensions, mean scores indicated that IT employees perceive their direct supervisors sometimes to fairly often display idealised influence (M = 3.65), inspirational motivation (M = 3.60), intellectual stimulation (M = 3.52) and individualised

consideration (M = 3.47). These scores indicate that the sample of IT professionals from public sector and technology and e-commerce organisations in South Africa, on average, feel that their leaders sometimes to fairly often instil pride, emphasise and communicate shared values, convey a sense of optimism about the future, challenge thinking and develop others (Buil et al., 2019; Manzoor, et al., 2019; Wang, 2017).

5.2.2.2 Interpreting the job crafting scores

Employees provided a measurement of their level of job crafting by using the Job Crafting Scale (JCS) developed by Tims et al. (2012). The JCS measuring model comprises four dimensions (i.e. increasing structural resources, increasing social job resources, increasing challenging job demands and decreasing hindering job demands), which measures the self-initiated work behaviours in which employees partake to modify their roles, and suit their needs, preferences and abilities. Responses were scored on a five-point Likert scale (1 = never, 5 = very often), with no items being reverse scored.

Existing literature does not offer a guideline to interpret the results of the JCS. Thus, the mean scores (M) were classified according to the Likert scale (i.e. 1 = never, 2 = seldom, 3 = regularly, 4 = often, 5 = very often). After closer investigation, the mean score (M) data in Table 4.7 showed the majority of IT employees reported that they, on average, often demonstrate behaviours that increase their structural job resources (M = 4.03, SD = 4.03). This involves increasing their opportunities for development and a variety of resources such as greater levels of autonomy or involvement in decision-making processes (Bell & Njoli, 2016; De Beer et al., 2016; Tims et al. 2012).

Furthermore, respondents indicated that they regularly to often increase their challenging job resources (M = 3.46, SD = .82), meaning that these individuals develop their capabilities to achieve difficult goals that enhance their personal growth and work performance (Bell & Njoli, 2016; De Beer et al., 2016). Conversely, IT professionals reported that on average, they seldom decrease hindering job demands (M = 2.84, SD = .94), which they consider to be overwhelming. Prior research shows that decreasing hindering job demands (i.e. time, cognitive and emotional demands) may point to a negative job crafting behaviour, which may lead to passive coping mechanisms such as task avoidance, and procrastination (De Beer et al., 2016). Expending extra effort to lessen job demands may result in exhaustion and burnout, highlighting the importance of exposing IT employees to tolerable and challenging work demands as opposed to hindering demands (The Future of Work Institute, n.d.). Furthermore,

IT professionals indicated that on average, they seldom increase social resources (M = 2.77, SD = .92) related to work aspects such as social support, feedback and coaching.

5.2.2.3 Interpreting the flourishing at work score

The Flourishing-at-Work Scale Short Form (FAWS-SF), developed by Rautenbach (2015), was used to evaluate employees' level of subjective well-being within the work context for the sample of IT professionals from two public sector and one technology and e-commerce organisation. The FAWS-SF consists of 17 items and three well-being dimensions, namely emotional, psychological and social. Respondent ratings were provided on a six-point rating scale ranging from 1 (never) to 6 (every day). No items in the scale were reverse scored.

Diedericks (2012) points out that flourishing is, directly and indirectly, related to both individual and organisational outcomes. Flourishing can be described as a form of high-level personal well-being and ideal human functioning (Diener, et al., 2010). The FAWS-SF evaluated the frequency in which a sample of employees within the IT divisions of two public sector and one e-commerce organisation felt they experienced well-being at work. The mean scores (M) resulting from this study were interpreted according to the dimensions provided by the Likert scale (i.e. 1 = never, 2 = once or twice, 3 = about once a week, 4 = about 2 or 3 times a week, 5 = almost every day, 6 = every day).

The findings of the study indicated that IT professionals felt they experience emotional well-being (M = 4.12) about 2 or 3 times a week to almost every day, suggesting that the majority of the sample feels satisfied in their jobs and, at this frequency, displays positive affect (Janse van Rensburg et al., 2017). Similarly, IT employees experience psychological well-being (M = 4.36) about 2 or 3 times a week to almost every day. It can be inferred that respondents, therefore, feel they are competent, engaged, able to learn and grow personally, that their work has meaning and purpose and that they can function autonomously relatively frequently.

Regarding social well-being (M = 3.79), it is evident that respondents experienced this dimension less frequently; about once a week to about 2 or 3 times a week, meaning that the experiences centred on social tasks were limited for the sample (Janse van Rensburg et al., 2017). Traditionally, IT professionals are portrayed to be working in social isolation, being computer bound and occupied with programming for extended hours (Chou & Pearson, 2011; McLachlan, Craig, & Coldwell, 2010). Clayton, Von Hellens and Nielsen (2009) and Chou and Pearson (2011) emphasise that working in IT does not necessarily require emotional involvement with other individuals and antisocial tendencies may be prevalent within the field.

A mean score (M) of 4.09 (SD = 3.10) is evident for the total scale, indicating that the sample of IT professionals at two public sector and one technology and e-commerce organisation experienced a state of mental health and well-being in the work environment (Redelinghuys et al., 2018), or flourishing at work, about once a week to about 2 or 3 times a week.

5.2.2.4 Interpreting the in-role performance score

Williams and Andersons' (1991) In-Role behaviour scale was used to evaluate the in-role performance of the research sample. Responses to items were measured on a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree).

The In-role Behaviour scale (5 items) was employed to understand the extent to which a sample of IT employees within the public sector and technology and e-commerce organisations felt they performed in their jobs. Current research for the scale does not include a standard by which to interpret its scores. Therefore, this study classified the scale's mean scores according to the Likert scale (1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree). Table 4.9 revealed that an overall mean score of 4.35 (SD = .59) was shown for task performance, meaning that IT professionals agree to strongly agree that they perform well in task-related or in-role work aspects. This finding also demonstrates that IT employees tend to select a score towards the higher end of the five-point Likert scale (slightly above 4), resulting in a negatively skewed (-1.46) distribution of data sets.

In-role behaviour can be described as the activities that impact the achieving of core job tasks in a direct manner, or otherwise support the achieving of tasks that contribute to the technical core of an organisation (Rich et al., 2010). Thus, task performance entails fulfilling the requirements that are part of the contract between the employer and employee (Sonnentag, Volmer, & Spychalla, 2008). Prior research has shown that individuals are inclined to assign higher ratings to their performance. Weseler and Niessen (2016), for example, also found a high score for self-performance (M = 4.17, SD = .77).

5.2.3 Interpreting the findings from the research propositions

This section provides an overview of the present research's main findings as well as theoretical support from prior studies.

Proposition 1a	Transformational leadership dimensions explain a significant proportion of the variance in increasing structural resources.	Accepted

The results of the multiple regression analysis revealed that idealised influence (β = .079), inspirational motivation (β = -.057), individualised consideration (β = .171) and intellectual stimulation (β = .252) do not contribute statistically significantly to explaining the variance in increasing structural resources at either the .01 or .05 level. However, the total transformational leadership model was shown to be significant (β = 3.046, p < .01). The results of the study indicate that the leader's combined transformational leadership behaviours play a substantial role in impacting the levels of increasing structural resources of IT employees within the public sector and e-commerce industries, by contributing 18.8% ($F(4,159) = 9.184$, $p < .01$, $R^2 = .188$) of the corresponding variance.

Scholars argue that under transformational leadership, individuals seek resources and make adjustments to expand the scope of their work (Breevaart et al., 2015; Wang, 2017). Wang et al. (2017) point out that leaders play a highly critical role in expanding jobs by seeking resources, while Thun and Bakker (2018) found that empowering leadership is associated positively with job crafting, including increasing structural resources. Transformational leaders facilitate creativity and autonomous behaviour, thereby encouraging employees to craft their jobs by increasing structural resources (Hetland et al., 2018).

Empirical research supports this finding, and have found transformational leadership to be associated with increasing structural resources (Afsar, Masood, & Umrani, 2019; Hetland et al., 2018; Wang et al., 2017). From their side, Hetland, Hetland, Bakker and Demerouti (2018) examined the effect of daily transformational leadership on daily increasing structural resources. The main effects model indicated a significant effect (β = .158, p < .001). Furthermore, Afsar, Masood, and Umrani (2019) found similar results, indicating that transformational leadership relates positively to increasing structural resources ($r = .739$, $p < .01$). Proposition 1a is thus accepted.

Proposition 1b	Transformational leadership dimensions explain a significant proportion of the variance in decreasing hindering job demands.	Rejected

The results of the study indicated that transformational leadership dimensions, namely idealised influence (β = -.013), inspirational motivation (β = -.104), individualised consideration (β = .036) and intellectual stimulation (β = .264) do not make a statistically significant contribution to the variance by decreasing hindering job demands at the .01 or .05 level. The total score for transformational leadership was also not found to be statistically significant with 4.5% ($F(4,159) = 1.867$, $p = .119$, $R^2 = .045$) variance for the sample of IT professionals within the public sector as well as technology and e-commerce organisations.

After an extensive search, the researcher found no prior study that investigated the impact of transformational leadership on decreasing hindering job demands. Wang et al. (2017) examined the indirect relationship between these variables. The research examined the relationship between transformational leadership and job crafting in dyads of supervisors and direct reports and found that transformational leadership does not indicate a significant indirect effect on reducing challenging demands.

Prior research explains decreasing hindering job demands as a negative effect of self-initiated changes to the characteristics of the job (job crafting) in the organisation (Petrou et al., 2012; Tims et al., 2012). Tims et al. (2012) note that the hindering demands dimension of job crafting is slightly different from increasing structural job resources, increasing social job resources and increasing challenging job demands, as these dimensions help transform work into a meaningful experience. Decreasing hindering job demands is the outcome of an unpleasant experience at work, as employees are inclined to alter aspects of the job, thus simplifying tasks if it becomes too challenging (Clegg & Spencer, 2007).

Lichtenthaler and Fischbach (2018) argue that employee-orientated leadership should be associated negatively with prevention-focused job crafting such as decreasing hindering job demands. The reason is that leaders decrease hindering job demands, thereby lessening the employees' need to reduce these demands. Esteves and Lopes (2016) examined perceived leadership and job crafting in the nursing field and posit that directive and aversive leadership styles are more likely to be associated with decreasing hindering job demands. Conversely, other researchers found that transformational leaders provide followers with work resources

such as job control and monitor job demands, work overload and work-life balance (Schaufeli, 2015).

The presence of transformational leadership behaviours, therefore, makes it unnecessary for employees to reduce hindering job demands. Prior research is thus in line with the results of this study. Thus, it can be concluded that IT professionals' perceptions of their supervisors' level of transformational leadership will show no significant impact on job crafting by decreasing hindering job demands in their roles. Proposition 1b is thus rejected.

Proposition 1c	Transformational leadership dimensions explain a significant proportion of the variance in increasing social job resources.	Accepted

For proposition 1c, the aim was to determine statistically whether transformational leadership dimensions explain a significant proportion of the variance in increasing social job resources. The research results show that, individually, idealised influence (β = -.014), inspirational motivation (β = -.167), individualised consideration (β = .195) and intellectual stimulation (β = .210) makes no statistically significant contribution to the variance observed in increasing social job resources at the .01 or .05 levels. The multiple regression analysis for the total transformational leadership model (β = 1.087, p < .01), however, indicates that ($F(4,159) = 16.990$, $p < .01$, $R^2 = .299$) IT professionals' perceptions of their supervisors' level of transformational leadership explain the variance in increasing social job resources for the sample of public sector and e-commerce employees.

Literature emphasises that leaders play an essential part in the social context of work (Wang, 2017). Leaders act as valuable resources, fostering career development through training opportunities and by transferring job-related information, knowledge and experience (Wang, 2017). Prior research demonstrated the link between transformational leadership and increasing social job resources. Afsar, Masood and Umrani (2019) and Bass and Riggio (2006) suggest that transformational leaders are attentive, provide their followers with individual consideration and highlight the salience of collective values. Individuals trust transformational leaders and establish emotional connections with them. These leaders are likely to encourage employees to craft social resources as these individuals will seek support from leaders and colleagues.

The literature supports the association between transformational leadership and increasing social job resources. Afsar, Masood and Umrani (2019) found that transformational leadership

is related positively to increasing social resources (r = .426, p < .01). Research by Hetland et al. (2018) showed a significant impact of transformational leadership on daily increasing social resources (B = .247, p < .001). Proposition 1c is therefore accepted.

Proposition 1d	Transformational leadership dimensions explain a significant proportion of the variance in increasing challenging job demands.	Accepted

The results of the multiple regression analysis indicated that idealised influence (β = -.007), inspirational motivation (β = .067), individualised consideration (β = .176) and intellectual stimulation (β = .146) contribute significantly by explaining the variance in increasing challenging job demands. The results of the present research found that the impact of these dimensions on the levels of increasing challenging job demands, of the mentioned IT professionals' sample, can be used to explain 13% (F(4,159) = 5.928, p < .01, R^2 = .130) of the variance observed in increasing challenging job demands.

Transformational leaders help expand employees' job scope (Hetland et al., 2018). Research indicates that when working with a transformational leader, employees may tend to engage in behaviour that increases challenging job demands. Syrek, Apostel and Antoni (2013) and Breevaart and Bakker (2017) note that individuals who face challenges in their work tend to cope with job demands by increasing their effort. Leaders' perspective on the nature of work and workload influences their followers, and these leaders encourage the enrichment of jobs, thereby increasing job challenges such as starting a new project (Wang et al., 2017). Thus, transformational leaders is shown to be critical to an organisation by initiating proactive behaviour through coaching and stimulating followers (Afsar, Masood, & Umrani, 2019).

Only a single study, by Afsar, Masood and Umrani (2019), confirms the link between transformational leadership and increasing challenging job demands. These scholars found that transformational leadership is related positively to increasing job challenges (r = .286). Thus, the findings of the present research finds support in this finding. Therefore, proposition 1c is accepted.

Proposition 2	Transformational leadership dimensions explain a significant proportion of the variance in flourishing at work.	Accepted

The results of the study indicate that idealised influence (β = .042), inspirational motivation (β = .408), individualised consideration (β = .115) and intellectual stimulation (β = .011), significantly explain the variance in flourishing at work at the .01 and .05 levels. This study demonstrates that the total transformational leadership model plays a critical role in impacting the levels of flourishing at work for the mentioned sample of IT professionals, by explaining 30.1% ($F(4,159) = 17.095$, $p < .01$, $R^2 = .301$) of the variance.

Significantly, the research results show that, from the distinct dimensions of transformational leadership, inspirational motivation contributes significantly to the variance in flourishing at work of the mentioned sample of IT professionals, at the .01 level. Mehari (2015) describes inspirational motivation as a transformational leadership dimension that encompasses the following work aspects: communication of future ideals, promotion of powerful symbols and motivating individuals to achieve. All these mentioned aspects encourage the achieving of individual goals and establishes a sense of belonging among employees.

Several studies have explored leadership behaviour in relation to various forms of well-being, for example, psychological, job-related and affective (Arnold et al., 2007; Van Dierendonck et al., 2004). Verbraak (2014) found that transformational leadership correlates significantly positively with psychological, social and physical well-being. No studies have been found that specifically investigate transformational leadership and flourishing at work directly. The present study found that IT professionals' perceptions of their supervisors' transformational leadership behaviours impact the view of their own emotional, psychological and social well-being. Proposition 2 was therefore accepted.

Proposition 3	Transformational leadership dimensions explain a significant proportion of the variance in in-role performance.	Accepted

Multiple regression analysis results demonstrated that idealised influence (β = .146), inspirational motivation (β = .258), individualised consideration (β = .379) and intellectual stimulation (β = -1.104), individually, are not statistically significant predictors of in-role performance at the .01 or .05 levels. Transformational leadership as a total score, however, significantly impacts the sample of IT professionals' perceptions of their task-specific

achievements at work within the public sector and e-commerce organisations, by explaining 9% ($F(4,158) = 3.928$, $p < .01$, $R^2 = .090$) of the variance observed in in-role performance.

According to Ahmed (2019), transformational leaders expect high performance from their employees. These leaders articulate a shared vision of the future and act as role models to facilitate the realisation of such goals. Additionally, transformational leaders provide individualised support, challenge followers' intellectual thinking, and set performance standards (Zhu & Mu, 2016). As these leaders fulfil individuals' basic needs by providing a resourceful job environment, employees' in-role performance is enhanced (Breevaart et al., 2014). The link between transformational leadership and performance has been well-researched, with several studies reporting strong associations for different industries (Buil, Martinez, & Matute, 2019; Chi & Pan, 2012; Piccolo & Colquitt, 2006; Wang et al., 2011). In line with these findings, the results of the present study indicate that IT professionals' ratings of their supervisors' level of transformational leadership are important. This is especially the case when predicting the self-reported in-role performance for the mentioned IT sample used in this study.

Proposition 4	Job crafting dimensions explain a significant proportion of the variance in flourishing at work.	Accepted

Results from the multiple regression analysis revealed that increasing social job resources and increasing structural job resources both contribute significantly to the variance observed in flourishing at work at the .01 level. Conversely, decreasing hindering job demands ($\beta = -.078$), and increasing challenging job demands ($\beta = .153$) make no significant contribution to the variance observed in flourishing at work at the .01 or .05 levels. The findings of the present research indicate that job crafting dimensions, as independent variables, explain 29.9% ($F(4,159) = 16.991$, $p < .01$, $R^2 = .299$) of the variance observed in flourishing at work.

Tims and Bakker (2010) argue that job crafting allows individuals to re-design their jobs in a way that brings about more control and meaningful work, which results in positive work outcomes. Employees re-design their jobs to align it with their individual skills, preferences and motivations. Such re-alignment, in turn, alters the nature of the job itself. Job demands are reduced, and employees can manage stress better, thereby enhancing workplace well-being and personal meaning (Seligman, 2011; Slemp, Kern, & Vella-Brodrick, 2015; Wrzesniewski, LoBuglio, Dutton, & Berg, 2013).

Limited research in the literature focuses on job crafting dimensions and flourishing at work, particularly in the context of Tims et al. (2012) model of job crafting. Demerouti et al. (2015), for example, when assessing supervisors and employees, found that the dimension of increasing structural resources is associated positively with flourishing at work. Bahmani et al. (2016) found a similar result, noting that the dimension of seeking resources impacts flourishing positively (2016). These findings support the results from the present study, indicating that IT professionals' levels of job crafting significantly impact flourishing at work – particularly the dimensions of increasing social job resources and increasing structural resources. Bahmani et al. (2016) found that reducing demands is linked negatively to flourishing at work. This finding provides support for the present study, which found that decreasing hindering job demands makes no significant contribution to the variance observed in flourishing at work. This result may also be explained by the respondents reporting that they seldom engage in behaviours that decrease hindering job demands.

Several studies have found positive associations between job crafting and flourishing at work (Demerouti et al., 2015; Robledo, Topa, & Zappalà, 2019). When accounting for the total job crafting model, it is evident that IT employees' engagement in such forms of behaviour has a significant effect on their emotional, social and psychological well-being. Thus, proposition 4 is accepted.

Proposition 5	Job crafting dimensions explains a significant proportion of the variance in in-role performance.	Accepted

The results of the multiple regression analysis showed that only increasing social job resources ($\beta = .366$, $p < .01$), contributes significantly to explaining the variance in in-role performance. The dimensions of decreasing hindering job demands, increasing structural job resources and increasing challenging demands do not make a statistically significant contribution to in-role performance at either the .01 or .05 levels. The results of the present study shows that job crafting dimensions, as a total, plays a more critical role in affecting the levels of in-role performance of the mentioned sample of IT professionals, by explaining 21.6% ($F(4,158) = 10.852$, $p < .01$, $R^2 = .216$) of the variance observed in in-role performance.

Hornung, Rosseau, Glaser, Angerer and Weigl (2010) argue that bottom-up approaches to work encourage proactive behaviour where employees take control over their jobs to enhance performance and creativity. It is important that employees are involved in the design of their jobs to create an ideal work environment, monitor aspects of their job, and act to reduce

negative outcomes such as poor performance (Tims et al., 2014). Research reveals that employees who engage in job crafting are satisfied with their work and channel these positive feelings to increase performance in work roles (Tims et al., 2013; Wang, 2017). Tims and Bakker (2010) note that job crafting facilitates performance because employees who alter the design of their jobs, proactively align job demands and job resources with their own needs and capabilities.

Increasing social job resources include social support, coaching by supervisors and social aspects of the job such as requesting feedback and enjoying adequate social interaction within the workplace (Tims et al., 2013). No studies were found that demonstrate a specific link between increasing social job resources and in-role performance. The present study found that the level of performance of IT professionals is impacted significantly by the increasing social aspects of their work. Furthermore, several studies, evaluating the relationship between job crafting and in-role performance, have found positive relationships (e.g. Bakker et al., 2012; Berg et al., 2010; Van Wingerden et al., 2017). Previous research findings, therefore, support the results of this research. Proposition 5 is thereby accepted.

Proposition 6	Flourishing at work explains a significant proportion of the variance in in-role performance.	Accepted

The main aim of proposition 6 was to assess the extent to which flourishing at-work explains a significant proportion of the variance in in-role performance. The research findings indicated that the dimensions of flourishing at work are a significant predictor of in-role performance at the .01 level. This study shows that levels of emotional, social and psychological well-being play a critical role in impacting the task-related (in-role) performance of the investigated sample of IT employees, by explaining 14.4% ($F(1,161) = 27.020$, $p < .01$, $R^2 = .144$) of the observed variance.

The Job Demands-Resources (JD-R) model indicates that personal, emotional, physical and cognitive characteristics of individuals contribute to work performance and thriving (Demerouti & Bakker, 2011). Research has indicated that flourishing at work is linked to superior work performance, while languishing has the opposite effect (Demerouti et al., 2015). Cross-sectional studies reviewed by Lyubomirsky, Sheldon and Schkade (2005) demonstrate that productivity and performance are associated positively with positive affect. Thus, flourishing employees feel and function well within their working environments. Rautenbach

and Rothmann (2017a) argue that when employees flourish within the working environment, lower levels of turnover intention and higher levels of performance are likely, within and beyond the scope of their jobs.

Limited research within academia has focused on flourishing at-work and in-role performance. Studies have focused mainly on contextual performance and educational settings. However, studies by Redelinghuys et al. (2018) and Redelinghuys et al. (2019) examining flourishing and in-role performance, have found significant results. The results of the present study in this regard, are therefore in accordance with prior research. IT professionals' level of flourishing has a significant impact on their perceived level of in-role performance within their organisation. Proposition 6 is thus accepted.

An additional analysis was conducted for a further investigation of the impact flourishing-at-work dimensions have on in-role performance. The research findings indicated that flourishing-at-work dimensions significantly explain the variance in in-role performance at the .01 and .05 levels. Furthermore, the findings of the analysis indicated that emotional well-being ($\beta = -.021$) and social well-being ($\beta = .009$) make no significant contribution to the variance observed in in-role performance. On the other hand, it was found that psychological well-being ($\beta = .254$) plays an important role in predicting the task-related performance of IT professionals for the investigated sample, by explaining 17.4% ($F(3,159) = 11.089$; $p < .01$, $R^2 = .173$) of the observed variance.

Regarding specifically psychological well-being, there is little to no evidence in the context of flourishing within the workplace. A meta-analytic review by Daniels and Harris (2000) found that certain forms of psychological well-being are related to in-role performance. Psychological well-being also results in high performance levels, which add value and are sustainable and tangible. Employees who experience positive emotions such as joy and interest, also find enhanced meaning in their work and are likely to be more productive (Wright & Cropanzano, 2004). Wright and Cropanzano (2004) note that studies show the link between psychological well-being, subjective performance measures, supervisory performance ratings, and actual pay as an objective performance rating. Furthermore, these authors argue that psychological well-being goes beyond simply correlating with job performance; rather potentially causing it. Poor psychological well-being is associated with critical individual outcomes, where low levels of job autonomy, control and high job strain show an adverse impact on employees' health (Robertson & Cooper, 2010). The finding of the present study is particularly interesting, as the

link between psychological well-being and in-role performance is highlighted within the context of the work environment.

5.4 Limitations of the study and recommendations for future research

It is important to consider the potential limitations of the study to ensure the research is investigated from various viewpoints. Several limitations have been identified, which must be acknowledged and will require attention in future research.

Firstly, scholars emphasised that caution should be taken when investigating transformational leadership as a single variable (Bass, 1999; Garg & Ramjee, 2013). Literature indicates that leaders may display transformational leadership as well as other leadership behaviours characterised by the full range of leadership theories. Future studies should evaluate the full range of leadership by focusing on the variables of job crafting, employee well-being and performance, to gain a deeper understanding of the complexities these variables hold. Regarding job crafting, Tims et al. (2012) note that individuals engage in such forms of behaviour due to a natural tendency towards proactivity or a certain personality type. Subsequent research should expand on this topic by examining the interplay of inherent traits and characteristics as substitutes for leadership.

Secondly, the selected target population comprised employees from the public sector and technology and e-commerce organisations. Therefore, care should be taken when generalising findings and trends to IT divisions within other industries and the broader South African population. Future research should cross-validate the trends that became apparent in this study and examine the variables of transformational leadership, job crafting, flourishing at work and in-role performance in other industries, such as mining, manufacturing, and health care. The samples from the public sector and technology and e-commerce groups were not large enough to use for cross-validation in the present study. While the findings of this research are important as a first step towards understanding these variables within the South African context, further research is required for different organisational environments to improve external validity.

Thirdly, the use of self-reported questionnaires to collect data could have led to fashioned socially desirable responses and other forms of bias in this research. This is particularly relevant for the findings on transformational leadership and in-role performance. To generate a well-rounded perspective of the variables under investigation, future studies should utilise both self

and employee ratings of leadership, in addition to co-worker and supervisor ratings of performance.

Fourthly, the research methodology entails a limitation as such. Employing a cross-sectional research design and a non-probability sampling method limits the generalisability of the result. Thus, it was not possible to study the stability of the variables of interest over time and generalise findings beyond the sample. Longitudinal research could garner additional insights on transformational leadership and job crafting behaviours, and the resulting impact on flourishing and performance in the workplace. Future studies should investigate alternative sampling methodologies (i.e. probability sampling) and employ a longitudinal design to draw causal inferences over an extended period.

Finally, the small, uniform sample size can be considered a limitation. Notwithstanding the small sample size, it can be argued that the research is representative of a valuable, important and scarce group of IT professionals. Further studies should incorporate a larger, more diverse sample that is representative of, for example, gender and cultural background.

5.5 Practical and managerial implications of the findings

The findings of the present research can be used to help select, develop and implement interventions that focus on building capacity for transformational leadership behaviours, employees' ability to craft their jobs, and employee well-being. Such capacitation of leaders will impact performance, retention and achieve success for the organisation at large, thereby reducing costs.

This study demonstrated that transformational leadership has a significant impact on increasing structural resources, increasing social job resources and increasing challenging job demands, as well as IT professionals' emotional, social and psychological well-being. It was also found that IT professionals' perceptions of their leaders' transformational leadership significantly impact their in-role performance. Garg and Ramjee (2013) and Wang et al. (2017) point out that leadership behaviours that foster trust, generate enthusiasm and provides coaching, may affect turnover intentions – employees' needing, wanting or being obliged to remain in an organisation. Thus, organisations should devise leadership strategies and interventions grounded in transformational leadership theory, as well as foster practices that support transformational leadership behaviours.

This study furthermore illuminates the need for organisations to focus on job crafting as a tool to enhance well-being and performance for IT professionals within the public sector and technology and e-commerce environments. It was found that job crafting dimensions have a significant impact on both flourishing at work and in-role performance. Organisations should invest in the development of initiatives aimed at building job crafting behaviours. Van Wingerden, Derks, and Bakker (2017) suggest that organisations should facilitate self-learning and development activities, which are challenging, to harness the benefits of increasing performance and well-being.

Furthermore, the study's findings emphasised the importance of IT professionals' mental health and well-being and the resulting impact on job performance. To improve on this situation in companies, it is important to understanding the organisational culture and its impact on individuals. Janse van Rensburg, Rothmann and Diedericks (2017) and Redelinghuys et al. (2018) suggest that surveys and interviews should be conducted to identify key issues and work-place factors that influence flourishing, in addition to improving communication. Strategies to improve well-being at the individual, group and organisational level, should be implemented based on outcomes of assessments aimed at measuring culture, well-being, for example. It is important to consider training focused on aspects such as personal growth, resilience, relationship building and counselling opportunities (Janse van Rensburg et al., 2017). While emotional and social well-being is important, the findings also highlight the importance of psychological well-being for IT professionals. Thus, organisations should bear these findings in mind when planning and developing new initiatives for the organisation.

5.6 Conclusion

This study contributes positively to the body of knowledge on leadership, proactive work behaviours and positive work outcomes. This is done by examining transformational leadership, job crafting, flourishing at work and in-role performance of IT professionals in the public sector and technology and e-commerce organisations in South Africa. Given that the nature of work is becoming more complex, dynamic and interdependent (Wang, 2017), the retention of highly skilled and scarce workforce segments is critical for an organisation's success (Diedericks & Rothmann, 2014). Supportive and empowering leadership and adaptable working environments are crucial if organisations strive to retain its workforce and lower the turnover costs (Diedericks and Rothmann, 2012; Hetland et al., 2018; Wang, 2017).

The findings of this research build on existing evidence regarding the relationships between transformational leadership, flourishing at work and in-role performance for IT professionals from the public sector and technology and e-commerce organisations. Thus, it is recommended future organisational studies expand the scope of this research to the broader South African context. Organisations must pay specific attention to the development, promotion and implementation of strategic initiatives, training interventions and practical changes. Such an approach will help organisations facilitate an environment in which a transformational leadership style is prevalent, employees can craft their jobs and employee well-being is prioritised. When organisations deliver such job outcomes, it will impact performance positively and strengthen their competitive advantage in the challenging national and global market.

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ANNEXURE A: INFORMATION LETTER

Department of Industrial Psychology

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Tel: 021 959 3184

INFORMATION SHEET FOR RESEARCH PARTICIPANTS

Dear participant

I, Kelly Cerfontyne, am currently studying towards my MA in Industrial and Organizational Psychology at the University of the Western Cape (student number: 3772110). At present, I am busy with my mini-thesis and would like to invite you to participate in the research.

The title of my thesis is:

The impact of Transformational Leadership and Job Crafting on Flourishing at Work and In-role Performance of Information Technology Professionals.

Before you decide to participate in this study, it is important that you understand why the research is being done and what it will involve. Please read the information below carefully and ask the researcher if there is anything that is not clear or if you need more information.

Study procedure

You will receive an electronic link forwarded by email which will allow you to access and complete the survey anonymously. To complete this survey, you will be required to answer different questions to reflect on your own experiences and views. A code will be assigned to your responses by the researcher and any information that can be used to identify you will be removed from your response. Your completed surveys can be returned to the SurveyMonkey platform, to which only the researcher and supervising researcher will have access. The survey should take approximately 15 minutes to complete.

Risks

The risks of this study are minimal. These risks are similar to those you experience when disclosing work-related information to others. You may decline to answer any or all questions and you may terminate your involvement at any time if you choose.

Benefits & Compensation:

There will be no direct benefit or compensation to you for your participation in this study. However, your contribution will help the Industrial/Organisational Psychology profession to better understand the impact of Transformational Leadership and Job Crafting on Flourishing and In-role Performance.

Confidentiality:

For the purposes of this research study, participant comments will not be anonymous. However, every effort will be made by the researcher to preserve your confidentiality through the following steps:

- A code will be assigned to each respondent by the researcher, and this code will be utilised for any documentation linked to each respondent.
- All respondent information will be kept in secure electronic folder by the researcher and raw data will be kept for an appropriate time to establish the validity of results.
- Data analysis will be conducted entirely by the primary researcher and supervisor, and the information generated from this research will be used only for this studys' completion and any publications which might result from this study.
- A report summarising the findings of the study will be made available to respondents and their employers. However, no identifiable data, including biographical variables such as age and gender, will be used in this report.
- Respondents' data will be kept confidential excluding cases in which the researcher is legally obligated to report specific incidents. This includes, but is not limited to, incidents of abuse and suicide risk

Voluntary Participation:

Your participation in this study is voluntary and you are free to withdraw at any time without giving a reason. Should you decide to take part in this study, you will be asked to provide your consent by marking the relevant box before you start the online survey. If you do not take part in this study, your relationship with the researcher will not be affected.

Should you have any questions regarding this study or wish to report any problems you have experienced related to the study, please contact me on the details listed below:

Researcher:
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ANNEXURE B: INFORMED CONSENT

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CONSENT FORM FOR RESEARCH PARTICIPANTS

The impact of Transformational Leadership and Job Crafting on Flourishing and In-role Performance of Information Technology Professionals

I have read and I understand the provided information and have had the opportunity to ask questions. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving a reason and without cost. I understand that I will be given a copy of this consent form. I voluntarily agree to take part in this study.

Participant's Name & Surname _____

Signature _____ Date _____

Should you have any questions regarding this study or wish to report any problems you have experienced related to the study, please contact me on the details listed below:

Researcher:
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ANNEXURE C: TRANSFORMATIONAL LEADERSHIP SUBSCALE

SECTION 1

This section of the questionnaire will require you to reflect on your supervisors' leadership style as you perceive it. Please answer all items in this questionnaire and remember that there are no right or wrong answers. The word 'others' refers to your colleagues, your supervisors' peers and yourself. Judge how frequently each statement fits your supervisor's leadership behaviour in the organisation by marking the appropriate box with an 'X'. For example:

My supervisor….

Q96	enjoys receiving praise and admiration from others	**Not at all**	~~**Once in a while**~~	**Sometimes**	**Fairly often**	**Frequently, if not always**

Q1	instils pride in others for being associated with him/her	**Not at all**	**Once in a while**	**Sometimes**	**Fairly often**	**Frequently, if not always**
Q2	goes beyond self-interest for the good of the group	**Not at all**	**Once in a while**	**Sometimes**	**Fairly often**	**Frequently, if not always**
Q3	acts in ways that builds staff's respect for him/her	**Not at all**	**Once in a while**	**Sometimes**	**Fairly often**	**Frequently, if not always**
Q4	displays a sense of power and confidence	**Not at all**	**Once in a while**	**Sometimes**	**Fairly often**	**Frequently, if not always**
Q5	talks about his/her most important values and beliefs	**Not at all**	**Once in a while**	**Sometimes**	**Fairly often**	**Frequently, if not always**
Q6	specifies the importance of having a strong sense of purpose	**Not at all**	**Once in a while**	**Sometimes**	**Fairly often**	**Frequently, if not always**
Q7	considers the moral and ethical consequences of his/her decisions	**Not at all**	**Once in a while**	**Sometimes**	**Fairly often**	**Frequently, if not always**
Q8	emphasizes the importance of having a collective sense of mission	**Not at all**	**Once in a while**	**Sometimes**	**Fairly often**	**Frequently, if not always**

Q9	talks optimistically about the future	**Not at all**	**Once in a while**	**Sometimes**	**Fairly often**	**Frequently, if not always**
Q10	talks enthusiastically about what needs to be accomplished	**Not at all**	**Once in a while**	**Sometimes**	**Fairly often**	**Frequently, if not always**
Q11	articulates a compelling vision of the future	**Not at all**	**Once in a while**	**Sometimes**	**Fairly often**	**Frequently, if not always**
Q12	expresses confidence that goals will be achieved	**Not at all**	**Once in a while**	**Sometimes**	**Fairly often**	**Frequently, if not always**
Q13	re-examines critical assumptions to question whether they are appropriate	**Not at all**	**Once in a while**	**Sometimes**	**Fairly often**	**Frequently, if not always**
Q14	seeks differing perspectives when solving problems	**Not at all**	**Once in a while**	**Sometimes**	**Fairly often**	**Frequently, if not always**
Q15	gets others to look at problems from many different angles	**Not at all**	**Once in a while**	**Sometimes**	**Fairly often**	**Frequently, if not always**
Q16	suggests new ways of looking at how to complete assignments	**Not at all**	**Once in a while**	**Sometimes**	**Fairly often**	**Frequently, if not always**
Q17	spends time teaching and coaching	**Not at all**	**Once in a while**	**Sometimes**	**Fairly often**	**Frequently, if not always**
Q18	treats others as individuals rather than just a member of a group	**Not at all**	**Once in a while**	**Sometimes**	**Fairly often**	**Frequently, if not always**
Q19	considers an individual as having different needs, abilities, and aspirations from others	**Not at all**	**Once in a while**	**Sometimes**	**Fairly often**	**Frequently, if not always**
Q20	helps others to develop their strengths	**Not at all**	**Once in a while**	**Sometimes**	**Fairly often**	**Frequently, if not always**

ANNEXURE D: JOB CRAFTING SCALE

SECTION 2

This section of the questionnaire will require you to reflect on your own behaviours while at work as you perceive it. Please answer all items in this questionnaire and remember that there are no right or wrong answers. Judge how frequently each statement fits your work behaviours in your current position by marking the appropriate box with an 'X'. For example:

Q97	I try to do different tasks at work everyday	**Never**	**Seldom**	**Regularly**	**Often**	~~**Very often**~~

Q21	I try to develop my capabilities	**Never**	**Seldom**	**Regularly**	**Often**	**Very often**
Q22	I try to develop myself professionally	**Never**	**Seldom**	**Regularly**	**Often**	**Very often**
Q23	I try to learn new things at work	**Never**	**Seldom**	**Regularly**	**Often**	**Very often**
Q24	I make sure that I use my capacities to the fullest	**Never**	**Seldom**	**Regularly**	**Often**	**Very often**
Q25	I decide on my own how I do things	**Never**	**Seldom**	**Regularly**	**Often**	**Very often**
Q26	I make sure that my work is mentally less intense	**Never**	**Seldom**	**Regularly**	**Often**	**Very often**
Q27	I try to ensure that my work is emotionally less intense	**Never**	**Seldom**	**Regularly**	**Often**	**Very often**
Q28	I manage my work so that I try to minimize contact with people whose problems affect me emotionally	**Never**	**Seldom**	**Regularly**	**Often**	**Very often**

Q29	I organize my work so as to minimize contact with people whose expectations are unrealistic	**Never**	**Seldom**	**Regularly**	**Often**	**Very often**
Q28	I try to ensure that I do not have to make many difficult decisions at work	**Never**	**Seldom**	**Regularly**	**Often**	**Very often**
Q29	I organize my work in such a way to make sure that I do not have to concentrate for too long a period at once	**Never**	**Seldom**	**Regularly**	**Often**	**Very often**
Q30	I ask my supervisor to coach me	**Never**	**Seldom**	**Regularly**	**Often**	**Very often**
Q31	I ask whether my supervisor is satisfied with my work	**Never**	**Seldom**	**Regularly**	**Often**	**Very often**
Q32	I look to my supervisor for inspiration	**Never**	**Seldom**	**Regularly**	**Often**	**Very often**
Q33	I ask others for feedback on my job performance	**Never**	**Seldom**	**Regularly**	**Often**	**Very often**
Q34	I ask colleagues for advice	**Never**	**Seldom**	**Regularly**	**Often**	**Very often**
Q35	When an interesting project comes along, I offer myself proactively as project co-worker	**Never**	**Seldom**	**Regularly**	**Often**	**Very often**
Q36	If there are new developments, I am one of the first to learn about them and try them out	**Never**	**Seldom**	**Regularly**	**Often**	**Very often**

Q37	When there is not much to do at work, I see it as a chance to start new projects	**Never**	**Seldom**	**Regularly**	**Often**	**Very often**
Q38	I regularly take on extra tasks even though I do not receive extra salary for them	**Never**	**Seldom**	**Regularly**	**Often**	**Very often**
Q39	I try to make my work more challenging by examining the underlying relationships between aspects of my job	**Never**	**Seldom**	**Regularly**	**Often**	**Very often**

ANNEXURE E: FLOURISHING-AT-WORK SCALE

SECTION 3

This section of the questionnaire will require you to reflect on your feelings about your work as you perceive it. Please answer all items in this questionnaire and remember that there are no right or wrong answers. The Judge how frequently each statement fits in the organisation by marking the appropriate box with an 'X'. For example:

During the past month at work, how often did you…

Q98	feel irritated?	**Never**	**Once or twice**	**About once a week**	**About 2 or 3 times a week**	**Almost every day**	**Every day**

Q40	feel happy?	**Never**	**Once or twice**	**About once a week**	**About 2 or 3 times a week**	**Almost every day**	**Every day**
Q41	feel particularly interested in something?	**Never**	**Once or twice**	**About once a week**	**About 2 or 3 times a week**	**Almost every day**	**Every day**
Q42	feel grateful?	**Never**	**Once or twice**	**About once a week**	**About 2 or 3 times a week**	**Almost every day**	**Every day**
Q43	feel upset?	**Never**	**Once or twice**	**About once a week**	**About 2 or 3 times a week**	**Almost every day**	**Every day**
Q44	feel depressed?	**Never**	**Once or twice**	**About once a week**	**About 2 or 3 times a week**	**Almost every day**	**Every day**
Q45	feel bored?	**Never**	**Once or twice**	**About once a week**	**About 2 or 3 times a week**	**Almost every day**	**Every day**

Q46	experience satisfaction with your job?	**Never**	**Once or twice**	**About once a week**	**About 2 or 3 times a week**	**Almost every day**	**Every day**
Q47	feel confident to think or express your own ideas and opinions?	**Never**	**Once or twice**	**About once a week**	**About 2 or 3 times a week**	**Almost every day**	**Every day**
Q48	feel good at managing the responsibilities of your job?	**Never**	**Once or twice**	**About once a week**	**About 2 or 3 times a week**	**Almost every day**	**Every day**
Q49	feel really connected with other people at your job?	**Never**	**Once or twice**	**About once a week**	**About 2 or 3 times a week**	**Almost every day**	**Every day**
Q50	find yourself learning often?	**Never**	**Once or twice**	**About once a week**	**About 2 or 3 times a week**	**Almost every day**	**Every day**
Q51	feel that your work is meaningful?	**Never**	**Once or twice**	**About once a week**	**About 2 or 3 times a week**	**Almost every day**	**Every day**
Q52	feel that the work you do serves a greater purpose?	**Never**	**Once or twice**	**About once a week**	**About 2 or 3 times a week**	**Almost every day**	**Every day**
Q53	focus a great deal of attention on your work?	**Never**	**Once or twice**	**About once a week**	**About 2 or 3 times a week**	**Almost every day**	**Every day**
Q54	get excited when you performed well on your job?	**Never**	**Once or twice**	**About once a week**	**About 2 or 3 times a week**	**Almost every day**	**Every day**

Q55	feel energized when you work?	**Never**	**Once or twice**	**About once a week**	**About 2 or 3 times a week**	**Almost every day**	**Every day**
Q56	feel you had something important to contribute to this organization?	**Never**	**Once or twice**	**About once a week**	**About 2 or 3 times a week**	**Almost every day**	**Every day**
Q57	feel that you really belong to this organization?	**Never**	**Once or twice**	**About once a week**	**About 2 or 3 times a week**	**Almost every day**	**Every day**
Q58	feel this organization is becoming a better place for people like you?	**Never**	**Once or twice**	**About once a week**	**About 2 or 3 times a week**	**Almost every day**	**Every day**
Q59	feel that people in your organization are basically good?	**Never**	**Once or twice**	**About once a week**	**About 2 or 3 times a week**	**Almost every day**	**Every day**
Q60	feel that the way your organization works, makes sense to you?	**Never**	**Once or twice**	**About once a week**	**About 2 or 3 times a week**	**Almost every day**	**Every day**

ANNEXURE F: IN-ROLE BEHAVIOUR SCALE

SECTION 4

This questionnaire will require you to reflect on your performance within your job role as you perceive it. Please answer all items in this questionnaire and remember that there are no right or wrong answers. Judge how strongly you disagree or agree with each statement regarding your performance in your organisation by marking the appropriate box with an 'X'. For example:

Q99	I work hard at all times	**Strongly disagree**	**Disagree**	~~**Neutral**~~	**Agree**	**Strongly agree**

Q61	I adequately complete my assigned duties	**Strongly disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly agree**
Q62	I fulfill the responsibilities specified in my job description	**Strongly disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly agree**
Q63	I perform tasks that are expected of me	**Strongly disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly agree**
Q64	I meet the formal performance requirements of the job	**Strongly disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly agree**
Q65	I engage in activities that will directly affect my performance evaluation	**Strongly disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly agree**
Q66	I neglect aspects of the job that I am expected to perform	**Strongly disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly agree**
Q67	I fail to perform essential duties	**Strongly disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly agree**

ANNEXURE G: DEMOGRAPHIC AND EMPLOYMENT INFORMATION

SECTION 5

Please provide the following demographic information. Use the spaces provided to write down your answer or mark the boxes with an 'X' where appropriate. For example:

Q99	Indicate your employment status	
	~~Employed~~	Unemployed

Q68	Indicate your gender	
	Male	Female

Q69	Indicate your race					
	African	Coloured	Indian	Asian	White	Other

Q70	Indicate your age

Q71	Indicate your highest education level
	Doctorate
	Masters
	Honours
	Bachelor's degree
	Diploma
	Higher certificate
	Matric
	Other

Q72	**Indicate the number of years you have been in the information technology industry**	
Q73	**Indicate the number of years you have spent in your current position**	
Q74	**Indicate the number of years you have spent in your current organisation**	
Q75	**Indicate the number of years you have spent working under your current supervisor**	

ANNEXURE H: EDITING CERTIFICATE

WELLINGTON

7655

04 June 2020

TO WHOM IT MAY CONCERN:

I hereby confirm that the MA dissertation *The impact of transformational leadership and job crafting on flourishing at work and in-role performance of Information Technology professionals* by Ms K Cerfontyne (student no: 3772110) was edited and groomed to the best of my ability. The processing included recommendations to improve the language and logical structure, guide the line of argument as well as to enhance the presentation. I am satisfied that, provided my changes to the text and my recommendations are implemented, the language would be of a standard fit for publication.

Rev Claude Vosloo

Language and knowledge practitioner and consultant

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Don't think outside the box, reinvent the box