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An intervention study to investigate development centres as an avenue to improve the self-efficacy of university graduates

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A mini-thesis submitted in partial fulfilment of the requirements leading to the award of a Master's Degree in Commerce in the Department of Industrial Psychology, at the University of the Western Cape.

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a place of quality,
a place to grow,
from hope to action
through knowledge

KEYWORDS

Self-efficacy; Development Centres; Graduate Employability; Competency-based Assessments; Social Cognitive Theory; Employability Models; Higher Education

ABSTRACT

This study investigated development centres as a method to improve the generalised self-efficacy of university graduates. This research was motivated by the various challenges graduates face in order to successfully transition into the world of work. To reach employability, graduates face high unemployment rates, inequality, a slow growing economy, high employer expectations, and a skills mismatch, all of which impacts their self-efficacy, performance and motivation levels. The sample population for this research included Industrial Psychology graduates at a select university in the Western Cape, South Africa (*n*=17). A quasi-experimental methodology was implemented where an intervention group (*n*=7) and a control group (*n*=10) were taken through a development centre approach. The primary research objective was to identify whether the generalised self-efficacy of graduates can be positively affected by a development centre approach in the short-term and long-term. To determine the short-term effects of self-efficacy, the intervention group was taken through a pre-test questionnaire (i.e. self-efficacy questionnaire), an in-basket assessment, and a competency-based interview, followed by a post-test questionnaire (i.e. self-efficacy questionnaire). Similarly, the control group was asked to complete the pre-test questionnaire (i.e. self-efficacy questionnaire) on the same day as the intervention group. Thereafter, the long-term effect was tested by tasking both intervention and control groups to complete a post-test questionnaire (i.e. self-efficacy) three months after the initial intervention. The results of the intervention indicated that a development centre approach has a positive impact on self-efficacy levels over the short and medium term. Results from the study emphasises the importance of self-efficacy in graduate employability and indicate how development centres can be used to improve self-efficacy levels. The findings of this study provide a basis for future research into the further development of graduate self-efficacy and the potential benefits for first time job seekers.

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Signed by,

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TO NOTE

- This mini-thesis was prepared utilising APA 6th edition referencing guidelines.

- This thesis constitutes 50% of the structured Master's degree in Industrial Psychology. Therefore, the mini-thesis is only one requirement of the coursework Master's degree.

- According to the University of the Western Cape thesis guide, a mini-thesis is normally between 7 000 – 20 000 words in length and is limited in scope.

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CHAPTER ONE: INTRODUCTION

1.1 INTRODUCTION AND BACKGROUND OF THE STUDY

South Africa, as a developing country, has experienced vast growth in many aspects over the past decade. However, the youth unemployment rate has increased significantly throughout the years. Stats South Africa (2019) reports that 55,2% of youth (individuals defined between 15-35 years) were unemployed in 2019, 31% of which were graduates with tertiary qualifications. Nationally, it appears that gaining entry into tertiary institutions have become easier, however, accessing a job after graduating has become a continuous struggle for many degree holders. There are most likely a number of reasons for the lack of employment, including a slow growing economy, automation of knowledge work, and a skills mismatch (Faku, 2019; King, 2009). However, one of the most often cited reasons is the gap between the theory learnt at university and the practical application thereof in organisations. Oluwajodu, Blaauw, Greyling, and Kleynhans (2015) posit that graduates are mostly theoretically inclined and are unaware of key job requirements. The gap between theory and practice often results in having to implement long orientation periods to integrate graduates into practical work processes. Moreover, many businesses have expressed their reluctance to support graduate training programmes in order to bridge the gap between the university setting and the world of work (Jackson, 2009).

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Against this background, graduate employability has become a topical issue in the management and personnel selection literature (Coe, 2016; Jonck, 2017; Moolman, 2017; Nwanua, Ohei, Brink & Abiodun, 2019). Du Preez, van der Merwe and Swart (2019, p.93) describe the term employability as “the potential of an individual to obtain employment and often includes attributes relating to knowledge, skills and abilities”. Employability is influenced by four broad and interlinked aspects, namely (1) skillful practice (i.e. problem-solving and lifelong learning, communication, management of self, time, and resources); (2) deep understandings of training/specialisation (i.e. proficiency and expertise in field); (3) valuable beliefs regarding one’s identity and self-worth; and lastly (4) metacognition (self-awareness and the confidence to reflect on and action) (Griesel & Parker, 2009). Creating employable graduates is critical to both societal and economic success, as they are the next generation to make a meaningful contribution to society. When graduates are employable, they display graduate

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attributes, skills and qualifications that organisations deem essential in creating value for the organisation and its key stakeholders.

Gray (2016) states that despite the ever-changing uncertain world of work, what remains certain is that prospective employees, such as graduates, will need to align their skillset to the needs of organisations. Staying relevant, not only in terms of qualifications, but also hard and soft skills, will be necessary for graduates in order to overcome the various economic, political, technological and workforce changes and challenges. In addition to the expert technical skills and knowledge that most graduates have developed as part of their tertiary training, organisations are looking for well-adjusted employees that can quickly integrate into the world of work. On the other hand, while employers continuously seek advanced and skillful graduates, many believe that universities are not fully equipping students for life after their studies (Burke, Carter & Hughey, 2013; Jackson, 2009; Okeke-Uzodike & Naude, 2018). As universities are primarily focused on training students in critical skills to successfully do a specific job, they often overlook the intra- and interpersonal skills that make graduates successful employees.

One way to develop desired graduate competencies and attributes is by exposing graduates to opportunities that develop these skills during their formal studies. The idea of internships, apprenticeships, and practicums comes to mind to bridge the gap between theory and practice. However, in an overcrowded curriculum, it is difficult for institutes of higher education to provide these training opportunities. Tertiary institutions also face budget cuts, which often result in a lack of resources for universities to fund these training opportunities (Badat, 2010). One possible avenue that seems to present a fruitful alternative is short and directed training opportunities as part of the curriculum, rather than a standalone activity. Some examples include laboratory training, observations, case studies, and industry visits. One approach that seems to have gained interest and popularity is competency-based assessments or simulations (Boritz & Carnaghan, 2010; ten Cate & Scheele, 2007). According to Rupp, Snyder, Mitchell-Gibbons and Thornton (2006), a development centre is a process where individuals go through a variety of work simulations and other assessments that provide them with training, feedback and coaching. These participants are evaluated by multiple assessors who are trained to observe and evaluate each candidate against a number of pre-set, work-related behavioural

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competencies (Schlebusch & Roodt, 2019). These competencies are assessed through simulations such as focus groups, competency-based interviews, in-basket assessments, and cognitive and personality psychometric assessments. Assessment centres, which forms part of the family of competency-based assessments, have a long history in predicting successful job applicants across a wide variety of positions and industries (Schlebusch & Roodt, 2019). However, development centres are typically used to develop important skills for employees, not graduates. The high cost associated with competency-based assessment are likely a deterrent for use with students. However, competency-based assessments offer many benefits that may not be prevalent in other development approaches.

Since competency-based assessments simulate real world scenarios, development centres can be used fruitfully to expose graduates to exercises and tasks that closely resembles the world of work. This is why competency-based assessments are regarded as a realistic job review prior to employment (Schlebusch & Roodt, 2019). For this reason, assessment centres are able to predict a participants' future work performance, promotions, and training performance in several professions, industries and countries (Hermelin, Lievens & Robertson, 2007; Meriac, Hoffman & Fleisher, 2008). The same results are replicated with graduates - graduates who score high on assessment centres typically outperform their peers when entering the world of work (Garavan, 2007). However, the question remains - "what are the most important generic competencies required to succeed in the world of work?" Archer and Davison (2008) argues that the following top 10 competencies are important when recruiting graduates in order to be successful in the modern world of work, namely: (1) communication skills, (2) team work, (3) integrity, (4) intellectual ability, (5) confidence, (6) character/personality, (7) planning and organisational skills, (8) good writing skills (i.e. literacy), (9) good with numbers (i.e. numeracy), and (10) analysis and decision-making skills. Thus, if universities and organisations desire to use competency-based assessments to enhance the employability of graduates they will have to develop simulations to measure communication, people skills, self-efficacy, numeracy and literacy skills, personality fit, problem solving and analysis, and interpersonal competencies.

Considering that most development centres will not be able to measure all these competencies, it is important to focus on the competencies that have the most

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significant impact on jobs across various sectors of the economy. In other words, generic competencies rather than specific competencies have the biggest impact on job success for graduates. Considering that lifelong learning and mastery is a key requirement to be successful for graduates across industries, self-efficacy seems to be a particularly important competency. Self-efficacy can broadly be described as one's self-confidence in their own abilities. Thus, self-efficacy is critically important since it enables the mastery of key competencies that is needed by graduates to be successful in the applied setting. Accordingly, the development of key competencies is enhanced if the individual has higher levels of generalised self-efficacy. Generalised self-efficacy is probably not the most important competency relative to other competencies, but since it enables the development of other skills and knowledge it is probably the most important enabling variable to develop. Generalised self-efficacy is of particular interest to scholars since literature suggests that self-efficacy is a skill that can be developed over time (Mazaheri & Yazdani, 2016). A person's judgment of their own abilities, has a significant impact, regardless of that individual's environment (Aghdami Baher, Najjarpoor Ostadi, & Livarjani, 2009). Whether graduates are searching for employment opportunities, going for interviews, or working in an organisation, an inherent belief in one's ability is instrumental in order to successfully achieve their goals and accomplish tasks. This literature thus considers self-efficacy to be critical to a graduate's professional and personal development.

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Research indicates that self-efficacy is the fifth most significant skill when recruiting graduates (Archer & Davison, 2008). Along these same lines, Harvey (2000) argues that employers require employees that, amongst others, have attributes such as willingness to learn, ability to take risks, display initiative, are self-motivated, self-managed, and has self-efficacy. As the world of work is becoming more complex and fast paced, self-efficacy will prove to be one of the most important attributes of successful employees, since it enables the acquisition and mastery of new skills. For this reason, it is important for universities to develop self-efficacy in students, not only because it is linked to higher scholastic achievement, but also because of its apparent link with job performance (Miraglia, Ceniotti, Alessandri & Borgogni, 2017).

Competency-based assessments, such as development centres, may be very useful to develop self-efficacy and other important competencies due the process being

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objective and providing direct feedback. Because of the opportunities provided by development and assessment centres for feedback and vicarious learning, one of the unintended benefits of the approaches may be the strengthening of generalised self-efficacy. Competency-based assessments have been linked to positive outcomes, such as (1) being able to measure complex characteristics, (2) seen as face valid and fair for participants, (3) has diminutive adverse impact, and (4) predicts a variety of criteria (Strudwick, 2017). If participation in development centres leads to short and long term improvements in generalised self-efficacy, in addition to the accurate measurement of graduate competencies, the approach may be regarded as a critical in preparing graduate students for the world of work

According to Luthans and Avolio (2007), individuals with high levels of self-efficacy demonstrate attributes such as the ability to set challenging goals, having higher levels of motivation, exerting considerable effort to attain their goals, and showing perseverance when facing difficulties. It is clear from the foregoing section that generalised self-efficacy offers various virtuous outcomes for graduates in preparing them for the world of work. With organisations seeking graduates with a myriad of skills and attributes, it will probably be unfair to expect universities to develop all the necessary skills for graduates to be successful in the workplace. However, if tertiary institutions can promote the development of self-efficacy, students should be in a position to develop the other attributes necessary to be successful in the workplace. Developing graduate self-efficacy through development centres can thus lead to more employable graduates who can readily take on challenging tasks and overcome obstacles easier. This study will, therefore, examine graduate self-efficacy and the impact of development centres in increasing their generalised self-efficacy levels in the short and long term.

1.2 RESEARCH PROBLEM

In a country with one of the highest unemployment rates in the world, tertiary education is often regarded as the best path to gaining high quality employment. Ndebele and Ndlovu (2019) agrees that developing a skilled workforce is critical for a high performing economy and distribution of wealth. The South African National Development Plan (NDP) has emphasised education and training improvement, job creation, and developing a capable state, as some of the goals to be achieved by 2030

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(National Planning Commission, 2013). However, despite the workplace creating an alluring picture for graduates, to date, it has become increasingly difficult for graduates to gain access and make an immediate impact in organisations. With the graduate unemployment rate at 31% in South Africa, it has become challenging for degree holders to find employment, despite the large skills gap in various sectors of the economy. This is further exacerbated by the COVID-19 pandemic, which has and will continue to have a devastating impact on the economy and unemployment. Stats South Africa (2019) concludes that the spiked increase in youth unemployment each year is largely driven by new entrants entering the labour market while the economy is not growing fast enough to create jobs for these new entrants. The net effect is that the supply of graduates surpasses the demand (Agopsowicz, Robinson, Stinebrickner, & Stinebrickner, 2017). For this reason, organisations choose the best employees from each new cohort of graduates. Organisations have a preference to employ graduates that have the greatest possibility to make the biggest impact in the shortest period of time. This places graduate potential and employability at the top of the list of criteria when recruiting new employees (Shivoro, Shalyefu & Kadhila, 2018).

Notwithstanding the many factors that challenge graduates in entering the workforce, it could also be argued that even when graduates have the appropriate training and skills, they may not be seen as ideal candidates due to a lack of soft skills (e.g. stress management, creativity, teamwork, communication skills, adaptability, and self-awareness (Succi & Canovi, 2019)). Universities focus on self-assessment that is largely centered around the product (such as the qualification and knowledge sharing), rather than the process thereof (such as essential graduate attributes), thus producing intellectually but not organisationally prepared graduates (Jacobs, Griswold, Swigart, Loviscky, & Heinen, 2018).

Those graduates that are able to secure gainful employment are faced with overwhelming expectations from employers. At the same time, it is probably not realistic to expect institutions of higher education to develop all the critical traits that is necessary for success across the full gambit of potential occupations. However, one overarching competency that seems to hold potential is generalised self-efficacy, since it enables the mastery of critical skills that may be necessary for success in the workplace. The allure of self-efficacy is the personal attribute that extends beyond

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industries and jobs and leads to higher levels of job success and increased self-confidence (Bandura, 1997).

Self-efficacy has been consistently linked with concepts such as work-readiness, employability, and personal development. Previous research found that a student's self-efficacy is correlated with several important outcomes which include self-controlled behaviour (such as awareness of learning methods utilised and time taken), motivation, and academic performance (Christensen, Fogarty & Wallace, 2002; Collins, 1982; Keef & Roush,1997). One of the ways that generalised self-efficacy can be developed is through the use of development centres which facilitates work integrated learning, opportunities for feedback, self-reflection and appraisals (Freudenberg, Cameron & Brimble, 2010). This study therefore aims to investigate the role of development centres in promoting higher levels of self-efficacy in graduates.

1.3 RESEARCH OBJECTIVES AND QUESTIONS

The main objective of this study is to analyse whether the generalised self-efficacy of graduates can be positively affected by a development centre approach.

This research study will be guided by the following research initiating questions:

1. Does the development centre intervention have a short-term (immediate) effect on the generalised self-efficacy of graduate students?
2. Does the development centre intervention have a long-term effect on the generalised self-efficacy of graduate students?

1.4 SIGNIFICANCE OF THE STUDY

The results of this study are important since the role of development assessment centres to increase generalised self-efficacy has not yet been consistently investigated. Assessments play a pivotal role in a graduate students' professional development as it not only measures academic standards but shapes their very behaviour and future (Higher Education Academy, 2012). Development assessment centres is but one methodology that have the potential to improve self-development through generalised self-efficacy. A study conducted by Dimotakis, Mitchell and

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Maurer (2017) revealed that assessment centres encourages participant behaviour which positively impacts career outcomes. Moreover, the study highlighted the importance of feedback and how positive and negative feedback affects a participant. Development assessment centres can be utilised to develop confident, self-aware and motivated students by providing them with developmental feedback through real life simulations, scenarios and demonstrations to equip them for work tasks they are yet to gain exposure to. When graduates are confident, they exude positive self-controlled behaviours (such as awareness of learning methods and time management) which are related to graduate employability, academic achievement, and motivation constructs (Christensen, Fogarty & Wallace, 2002; Collins, 1982; Keef & Roush,1997; Pajares, 1994; Gharetepeh, Safari, Pashaei, Razaei & Kajbaf, 2015; Harvey, 2000; Lowden, Hall, Elliot & Jon, 2011; Morrison, 2014).

This study therefore aims to bridge the gap in self-efficacy research and the development centre literature. Moreover, the aim of the study is to add to the limited research done on graduates' generalised self-efficacy in an effort to improve the employability of graduates. Not only is there a lack of research on this topic, but the relevance and importance of the findings holds important implications for institutions of higher education, policy makers and organisations that employ graduates. Freudenberg, Cameron and Brimble (2010) argues that generalised self-efficacy is very important since it has a significant impact on individual's chosen actions and career goals.

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For educators, in particular, the findings hold important pedagogical implications. If self-efficacy can be improved over the short and long-term through the use of development centre methodologies, it behoves teachers and educators to incorporate the principles of development centres into their teaching paradigms. The likely outcome will be improved scholastic performance in addition to higher levels of employability after graduation. The findings also hold important implications for organisations who aspire to employ graduates with the highest potential.

1.5 DELIMITATIONS OF THE RESEARCH STUDY

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This research study focused on graduate students who were in process of completing their honours degree in Industrial Organisational Psychology at a selected institution of higher education in the Western Cape, South Africa. The study followed a quasi-experimental approach with a pre-post study design.

1.6 DEFINITIONS OF KEY TERMS AND CONCEPTS

Generalised Self-efficacy: An individual's conviction with regards to their ability to manage and carry out motivation, cognitive resources and courses of action that will guide them to the success of precise tasks (Simons & Buitenbach, 2013).

Assessment Centre: An assessment centre is a standardised assessment process where one or more candidates go through numerous behavioural simulation activities and are evaluated by multiple assessors who are trained to observe and evaluate each candidate against a number of preset, work-related behavioural competencies. Assessment centres are utilised for either selection purposes or development purposes (Schlebusch & Roodt, 2019).

Development Centre: A development centre is a process where individuals go through a variety of work simulations and other assessments that provide individuals with training, feedback and coaching on a set of predefined behavioural competencies that are critical for professional success (Rupp, Snyder, Mitchell-Gibbons & Thornton, 2006).

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Work-readiness: Believed to be indicative of graduate potential in terms of long term work performance and professional progression (Cabellero & Walker, 2010).

Graduate: Referred to as previous students who have obtained an undergraduate or postgraduate university degree (Cabellero & Walker, 2010).

Graduate Employability: When graduates have "the skills, understandings and personal attributes that make them more likely to secure employment and be successful in their chosen occupations to the benefit of themselves, the workforce, the community and the economy" (Yorke, 2006).

1.7 OVERVIEW OF THE STUDY

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This dissertation is categorised into five chapters all comprising of an introduction, body and conclusion. These five chapters are presented in the dissertation as follows:

Chapter One: Introduction – this chapter provides an overview of the research problem and delineates the scope and significance of the research. The research questions and objective of the study are briefly discussed.

Chapter Two: Literature Review – this chapter evaluates the relevant literature and explains the key concepts through relevant theories. The theorising culminates in the forming of substantive research hypotheses.

Chapter Three: Research Design and Methodology – this chapter outlines how the study has been designed along with the methodology for executing the intervention study. Information is also provided about the measures that was used in the study as well as the statistical techniques that was utilised to test the research hypotheses.

Chapter Four: Results – this chapter focuses on the analysis and interpretation of the statistical results. The primary goal of this chapter is to examine whether statistical support was found for the research hypotheses.

Chapter Five: Discussion – this chapter concludes the research study by summarising the results, detailing the limitations of the study, and linking the results to the greater body of literature in this field. Finally, the limitations of the study are discussed, and possible avenues for future research recommended.

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1.8 CONCLUSION

This chapter introduced the research study by laying out the importance of key competencies for graduates to be employable and effective in the modern day world of work. In particular, the importance of generalised self-efficacy was discussed. Generalised self-efficacy is a strong predictor of continuous development and mastery which, in turn, is important for graduate recruits to be successful in the workplace. The benefits of generalised self-efficacy were discussed and linked to the principles of competency-based assessment. A review of the literature suggests that development centres may have important overlooked benefits such as improved generalised self-

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efficacy. The following chapter will provide an overview of the literature that was reviewed, and which resulted in the formulation of this study's theoretical model.

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CHAPTER TWO: LITERATURE REVIEW

2.1 INTRODUCTION

One of the most pressing issues in South Africa currently is the question around unemployment and the effort to decrease economic inequality (Francis & Webster, 2019). Former South African President, Thabo Mbeki (2004) adds to this by stating that the challenge to eliminate poverty has continuously been a central source of the national effort to rebuild the new South Africa. For this and many other reasons, eliminating poverty and reducing inequality has been highlighted as one of the National Development Plan's (NDP) main aims (National Planning Commission, 2013). One way of reducing poverty is by increasing employment rates throughout the various sectors in the economy. Voluminous research suggests that a fast growing and inclusive economy present the best long-term strategy to roll back income inequality, unemployment and poverty (OECD, 2012; Sulla & Zikhali, 2018). For this reason, the NPD aims to meet its laudable long-term goals by providing more broad based employment through faster economic growth, improving the quality of education, and building a capable state (National Planning Commission, 2013). However, several structural challenges hamper economic growth and broad based employment including low investment in basic infrastructure, inflexible labour laws, low levels of labour productivity and the high cost of doing business in South Africa. These trends have limited the ability and willingness of the private sector to employ graduates produced by the tertiary education sector over the last 20 years (Humburg, van der Velden, Verhagen, 2013; Tremblay, Lalancette, Roseveare, 2012). Organisations in the private sector focus on increasing the labour productivity of existing employees and follow a policy of doing 'more with less'. Although South Africa has always been characterised as a country with high unemployment rates, especially amongst semi-skilled or unskilled workers, this trend is now extending to skilled employees as well. Stats SA (2019) reports growing unemployment rates of 30.1% in quarter 1 of 2020, with the burden of unemployment squarely shouldered by the youth (aged 15-34 years). Further reports have revealed that 55,2% of the youth was unemployed in 2019, with 31% of these being graduates with tertiary qualifications (Stats SA, 2019). Evidently, not even a recognised degree can guarantee employment in South Africa. This presents a developmental issue not only faced by students, but by organisations, tertiary institutions, and the nation as a whole (Okeke-Uzodike & Naude, 2018).

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Across many countries, studies have found that long periods of unemployment and negative labour market experiences lead to lowered levels of self-esteem, depression, hopelessness, lowered levels of self-efficacy, and even suicide (Hammarstrom & Janlert, 1997; Mlatsheni, 2012). Thus, large scale unemployment is likely to have an adverse effect on the unemployed youth of South Africa (De Lannoy, Swartz, Lake, & Smith, 2015).

Moreover, a recent South African study of graduate perceptions highlighted that graduates display an unrealistic and overestimated view of their competence versus the view of universities and employers (Du Preez, van der Merwe & Swart, 2019). One of the reasons for this finding may be the lack of exposure to real-life work tasks in the applied work context.

Developing employable graduates who display desired graduate attributes is an important starting point in reducing the high unemployment rates of graduates. As previous research has indicated, organisations seek graduates with a combination of skills, such as problem solving skills, leadership skills, interpersonal skills and communication skills (Lowden, Hall, Elliot & Jon, 2011). However, with the lack of exposure to the working world, graduates may not have access to development opportunities to improve their employability. Du Preez, van der Merwe and Swart (2019) recommends the necessity for metacognitive competence development to help graduates develop an understanding of their own skills and what is required in the workplace. Hamilton, Carbone, Gonsalvez, and Jollands (2015) adds by stating that only when the development of practical and fundamental skills are prioritised, will graduates become employable.

Developing confident graduates is important for their preparation in handling challenges and opportunities that various industries and career paths present. When graduates have a high level of self-efficacy, they are more courageous in taking risks, make better decisions, are able to tackle challenges efficiently, set stimulating goals and commit to them, experience lower levels of stress, anxiety and depression, and puts more effort and perseverance into learning challenging tasks (Bandura, 1994; Luthans & Avolio, 2007). As a result, graduates can benefit from impactful methods in improving graduate self-efficacy and employability, such as coaching and mentoring programmes, work-integrated learning methods (Freudenberg, Cameron & Brimble, 2010), job shadowing, competency-based curriculum (Muraraneza, Mtshali, &

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Mukamana, 2017), and development centres. While the methods of developing graduate employability are pivotal to their future professional success, the underlying benefit of this development – self-efficacy – is also important to their personal growth.

The next section will look at the theoretical basis of generalised self-efficacy generally and, more specifically, at the links with competency-based assessments.

2.2 GRADUATE EMPLOYABILITY

According to Yorke (2006), graduate employability is described as graduates having "the skills, understandings and personal attributes that make them more likely to secure employment and be successful in their chosen occupations to the benefit of themselves, the workforce, the community and the economy". While many employability models are developed, Knight and Yorke (2002) suggest the USEM model, which stands for and consists of four interlinked components, namely Understanding, Skills, Efficacy and Metacognition. The essence of the USEM model is that it requires more than just generic skills or a qualification to be considered employable, and that these components are interdependent. Yorke (2006) denotes the significance of having the belief to apply one's abilities in various environments (i.e. self-efficacy), as just having the ability does not essentially mean expending one's ability.

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An additional employability framework developed by Dacre Pool and Sewell (2007), known as the CareerEDGE model (a mnemonic used to remember the five aspects of the model foundation), proposes a more logical, simplistic, detailed model. This model, as displayed in Figure 1 below, shows the foundation required for employability, along with the direction and relationship of further competencies required from graduates to develop their employability. The foundation of this model displays a degree of overlap, for example, work experience may be essential to career development learning, but may also inform degree subject learning relevant to an individual's course of study. According to Dacre Pool and Sewell (2007) the CareerEDGE model suggests that by providing graduates with various opportunities to attain and develop the five foundational aspects, and subsequently reflecting on and evaluating the attained experiences, will lead to increased levels of self-efficacy, self-esteem, and self-

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confidence, which links to employability. It is thus evident that although self-efficacy plays a crucial part in graduate employability, so does the access to development opportunities as represented in the five aspects of the CareerEDGE model foundation. Implementing creative opportunities for graduate development, such as job shadowing, industry visits, and development assessment centres, would be impactful in achieving both higher levels of confidence and employability. While the model presents key aspects in reaching employability, Pool (2017) mentions that obtaining employment does not assure graduates a satiating career or job.

It is interesting to note that both the USEM model and CareerEDGE model consider reflection/metacognition, self-efficacy, basic skills, and a level of work experience/understanding to be important to building employable graduates.

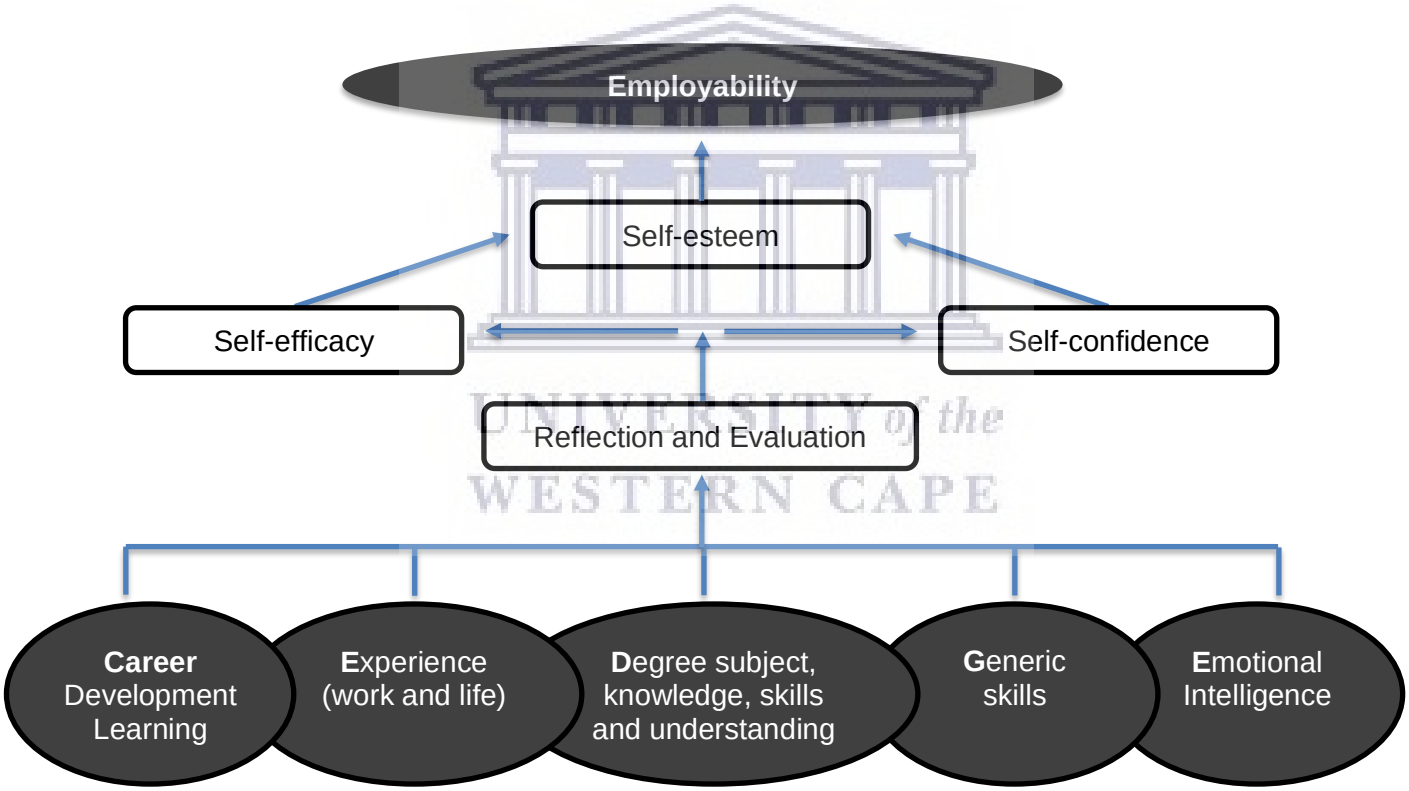

***Figure 1. CareerEDGE Model. Adapted from "The Key to Employability: Developing a Practical Model of Graduate Employability" by L. Dacre Pool & P. Sewell, 2007, Education and Training, 49*(4), p.280. Copyright 2007 by Emerald Group Publishing Limited.**

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Furthermore, Jones (2015) presents a model of employability that is informed by one's skills, confidence and self-regulated learning (refer to Figure 2 below). This model proposes that employability requires individuals who are confident and have the ability to manage their learning and skills. Jones (2015) proposes a definition of employability as the *"ability and attitude to apply and adapt knowledge and skills to current and future opportunities across a career path enabling contribution to a range of occupations in public, private or not-for-profit sectors".* The underpinning concepts of this employability model displays the need for knowledge and skills; the need for individuals with self-regulated learning abilities who are capable of adapting and broadening their knowledge; and the need for individuals to confidently apply one's knowledge and ability (self-efficacy) (Bandura, 1995; Jones, 2015; Zimmerman, 1990). This model proposes a virtues cycle between the skills that a person has obtained, their level of self-efficacy and self-regulated learning. The starting point of the process is largely unclear, but it seems logical that high levels of self-efficacy will enable self-regulated learning, which will improve one's skills. This cycle continues indefinitely through the graduate's career, where bigger or more complex tasks requires the acquisition of skills through self-regulated learning.

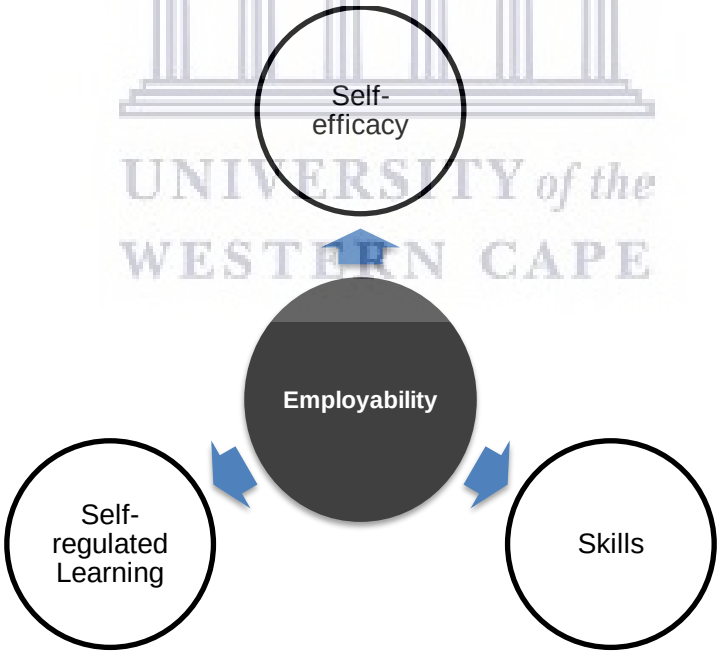

Figure 2. Components of Employability Model. Adapted from "Does Studying Taught Postgraduate Management Education increase Students Perceptions of their Employability?" by C. E. Jones, 2015, PhD Thesis, p.49.

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Another well-known employability model is Bridgstocks (2009) conceptual model of graduate attributes for employability that includes career management skills (refer to Figure 3). This model proposes the importance of career management skills in achieving employability (i.e. variation of high-impact and long-term career capabilities), including one's ability to intentionally self-manage and actively seek prospective opportunities. However, there seems to be a lack of literature on the links between career management capability and long-term graduate employability (Bridgstocks, 2009). Moreover, Bridgstocks (2009) suggests that learning how to manage one's career should commence early in a graduate's academic experience, with it being both compulsory and rewarded in higher education curriculum and programs. Although having the relevant and desired skills is necessary in achieving employability, this model also sheds light on the underpinning traits and dispositions that are a critical component of employability. These underpinning traits and dispositions (e.g. sociability, taking initiative, willingness to learn, openness to experience, and self-efficacy) are known as the foundation of successfully developing and applying career management skills (Bridgstocks, 2009; Jarvis, 2003; McMahon, Patton & Tatham, 2003; OECD, 2002). Although self-efficacy is recognised as an underlying characteristic in achieving employability throughout various employability models, it proves to be a critical attribute to graduate employability success. Pinquart, Juang and Silbereisen (2003) agrees by making mention of the importance of one's motivation and self-efficacy that plays a pivotal role in a graduate's transition experience from the academic environment to the work environment.

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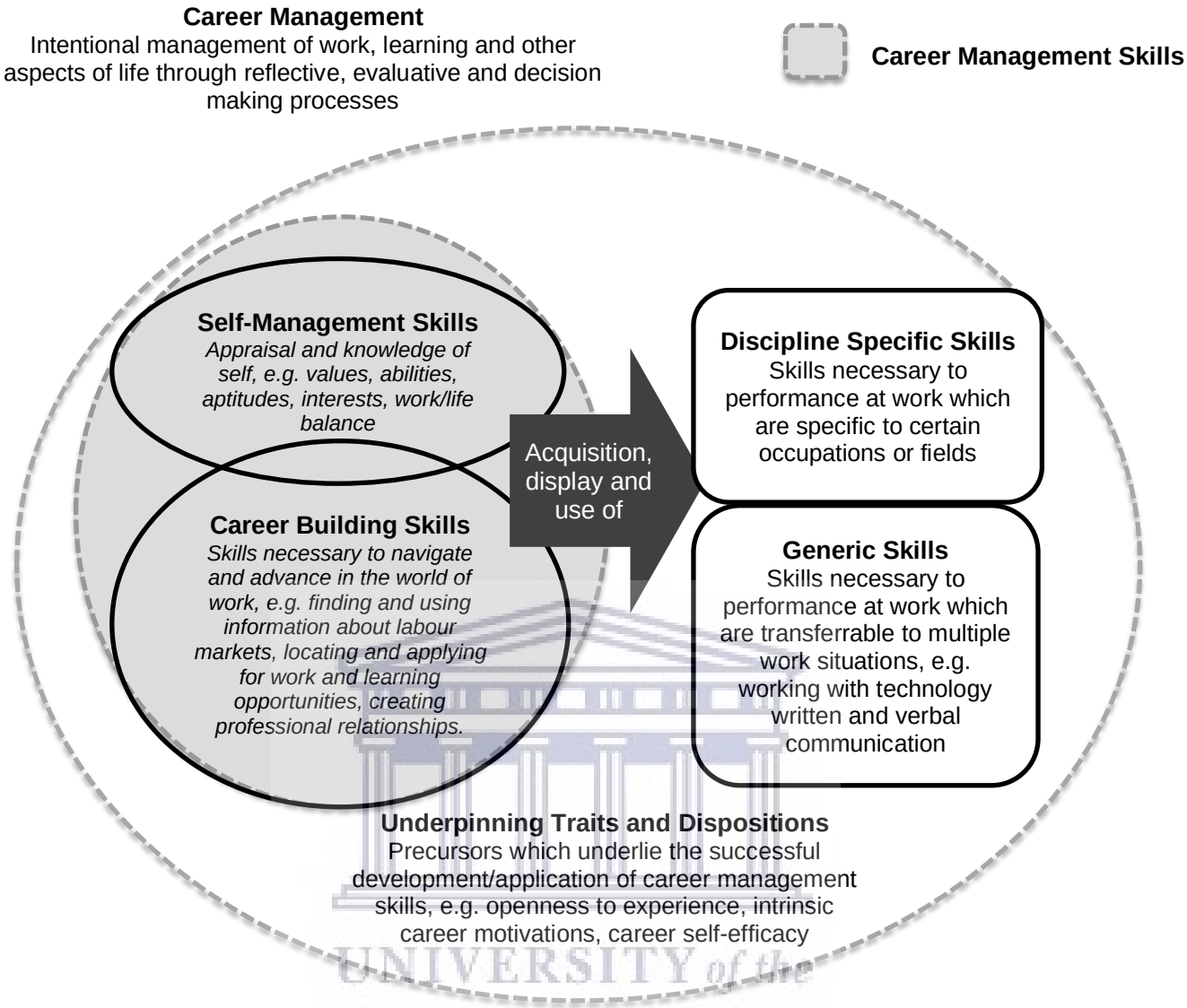

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***Figure 3. Conceptual Model of Graduate Attributes for Employability including Career Management Skills. Adapted from "The graduate attributes we've overlooked: Enhancing graduate employability through career management skills" by R. Bridgstock, 2009, Higher Education Research and Development, 28*(1), p.36. Copyright 2009 by HERDSA.**

A well-known model by Lent, Brown and Hackett (1994), derived from Bandura's (1986) social cognitive theory, presents a social cognitive framework. This framework highlights the socio-cognitive aspects of general academic and career interests, and the way in which interests promote career-related involvement and skill attainment. The model explains that through continuous task interaction, modelling and feedback, individuals enhance their abilities, improve their performance, develop a sense of self-

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efficacy in the tasks, and obtain expectations of the outcomes of their performance. The main emphasis of this model is that self-efficacy mechanisms are considered to be key mediators of an individual's choice and development (Lent, Brown & Hackett, 1994). Moreover, according to Bandura (1991), the social cognitive theory assumes that an individual's ability is dynamic in nature, and that in order to perform and achieve challenging goals/tasks it requires an individual to have both skills/abilities and a high level of self-efficacy in order to execute the goal/task effectively (Bandura, 1991). This model thus shows the importance of self-efficacy in an individual's choice of interest, subsequently developing the chosen interest, achieving the set goal/skill and in turn increasing one's self-efficacy and outcome expectation in a cyclical form. In light of the above, it should be noted that this framework principally deals with developmental tasks that transpire before, during, and shortly after graduates have entered a career. However, this framework has the potential to be inclusive of models/areas that delve into greater career paths and important work milestones (e.g. career success and stress management, career change etc.) (Lent, Brown & Hackett, 1994).

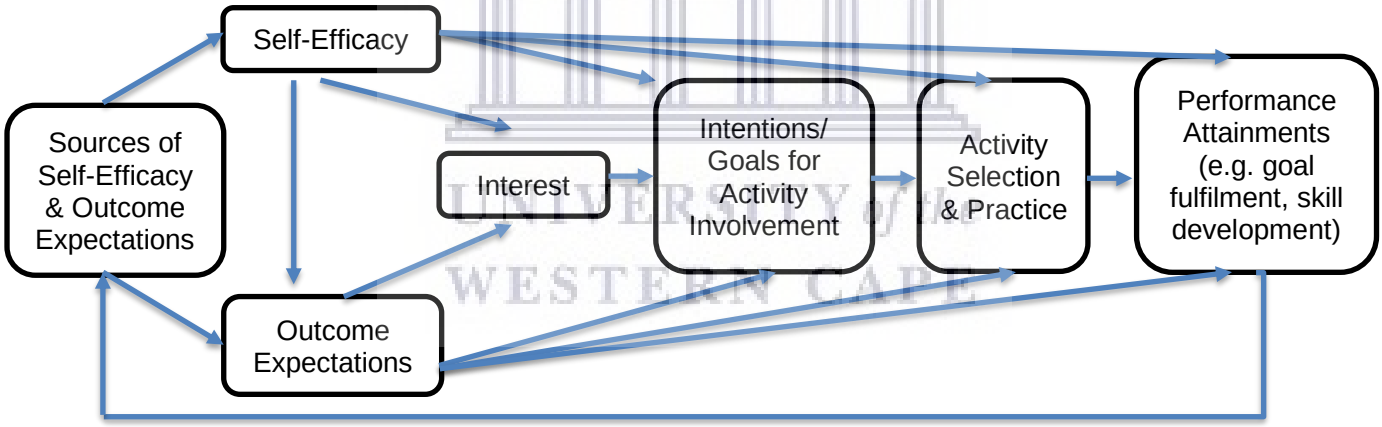

Figure 4. Model of Interest Development in the Social Cognitive Career Theory. Adapted from "Towards a Unifying Social Cognitive Theory of Career and Academic Interest, Choice, and Performance" by R. W. Lent, S. D. Brown and G. Hackett, 1994, Journal of Vocational Behaviour, 45, p.93. Copyright 1994 by Academic Press, Inc.

It is clear from the various theoretical employability models discussed above, that self-efficacy plays a rather important role in graduate employability. Many studies have

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revealed positive correlations between self-efficacy and employment search behaviour and graduate employment results (Moynihan, Roehling, LePine & Boswell, 2003; Pinquart, Juang & Silbereisen, 2003). Moreover, self-efficacy is also positively linked to academic achievement, motivation constructs, and self-controlled behaviour (such as awareness of learning methods utilised and time taken) (Collins, 1982; Gharetepeh et al., 2015; Harvey, 2000; Keef & Roush,1997; Lowden, Hall, Elliot & Jon, 2011; Morrison, 2014; Pajares, 2002). Further studies have demonstrated that self-efficacy positively correlates with career adaptability (Öncel, 2014; Atitsogbe, Mama, Sovet, Pair & Rossier, 2019), as well as demonstrating higher levels of self-efficacy linked to higher levels of perceived employability (Ngo, Liu, & Cheung, 2017). Developing confident graduates is important for the preparation of facing unfamiliar challenges and opportunities that the ever-changing working world presents. When graduates have a high level of self-efficacy, they are more courageous in taking risks, make better decisions, are able to deal with challenges efficiently, set stimulating goals and commit to them, experience lower levels of stress, anxiety and depression, and puts more effort and perseverance into learning challenging tasks (Bandura, 1994; Luthans & Avolio, 2007). Jones (2015) agrees by stating that those with high confidence levels are deemed as more employable due to their belief and ability to apply preferred behaviours and ways of work that lead to successful outcomes. With self-efficacy playing a key role in driving problem solving behaviour, the next section will breakdown self-efficacy in further detail.

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2.3 SELF-EFFICACY

Self-efficacy forms the core mechanism for developing an individual's motivation to exercise control over situations that affect their life (Sanchitra & Bandara, 2017). Simply put, self-efficacy is a belief an individual has about their ability to achieve specific tasks (Lunenburg, 2011). This popular theory is termed to describe an individual's belief regarding their ability to manage and carry out motivation, cognitive resources, and courses of action that will guide them to the success of specific tasks (Simons & Buitenbach, 2013). This definition proposes that efficacy relates to the achievement of a precise task and is situation specific. In addition to this, Bandura (1997) states that this social cognitive theory, of self-efficacy, is multi-faceted and varies across multiple circumstances and tasks.

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Further research states that efficacy is not a trait, but rather a general capability that evolves over time and experience (Mazaheri & Yazdani, 2016). This belief is primarily shaped by four sources within self-efficacy, namely, mastery experience, vicarious experience, verbal persuasion, and physiological arousal. Many studies have found positive outcomes when an individual displays all four sources of self-efficacy. Studies such as Allison and Keller (2004) discovered that a self-efficacy intervention involving all four self-efficacy sources led to advanced developments in older adult's physical activity performance. Moreover, self-efficacy plays an important role not only in the work environment, but in an individual's everyday lifestyle. Lunenburg (2011) states that self-efficacy influences the tasks an individual decides to learn and the objectives planned out for themselves.

Studies have also shown that self-efficacy plays a mediational role in student's selection of career choices. Pajares' (2003) studies indicated that self-efficacy beliefs impact the choice of majors and career paths of tertiary students. Moreover, Pajares (2003) outlines that undergraduates tend to choose majors and career paths based on the fields they feel most proficient in and deter from those fields that they believe they are less proficient in or are less able to compete. Bandura (1994) concurs with this by stating that the higher an individual's level of perceived self-efficacy, the wider the variety of career paths they seriously consider, the more interest they show in diverse career paths, and they are generally better prepared to deal with success and failures. Moreover, research shows that in relation to academic achievement, individuals with lower levels of self-efficacy achieve lower levels of academic success and continuous failure may lead to learned helplessness (Juan, Hannan & Namome, 2018). Learned helplessness is a psychological state where an individual avoids tasks that require persistence, interpret failure as a result of their lack of skills, negatively perceive tasks as challenges, and display a lack commitment (Filippello, Buzzai, Costa, Orecchio, & Sorrenti, 2020).

Generalised self-efficacy is clearly important for ongoing career success, but may also be very important during the application and recruitment process. While recruitment is a stage in achieving employment, many graduates experience the assessment and interviewing process for the first time, leaving them anxious and not knowing what to expect, impacting their confidence. Research on interviewing self-efficacy conducted by Tay, Ang and Van Dyne (2006) found that receiving feedback on interview

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performance success influences an individual's self-efficacy levels over time. This proves that job seekers with higher levels of self-efficacy in interview capabilities typically receive more work opportunities.

In addition to this, the sources of self-efficacy also influence an individual's effort and perseverance when confronted with challenging tasks. According to Bandura (1994) there are four sources that form self-efficacy, namely, mastery experience, vicarious experience, verbal persuasion, and psychological arousal (refer to Figure 4 below). It is believed that in order for changes in self-efficacy to occur, the cognitive processing of these sources is required (Bandura, 1997).

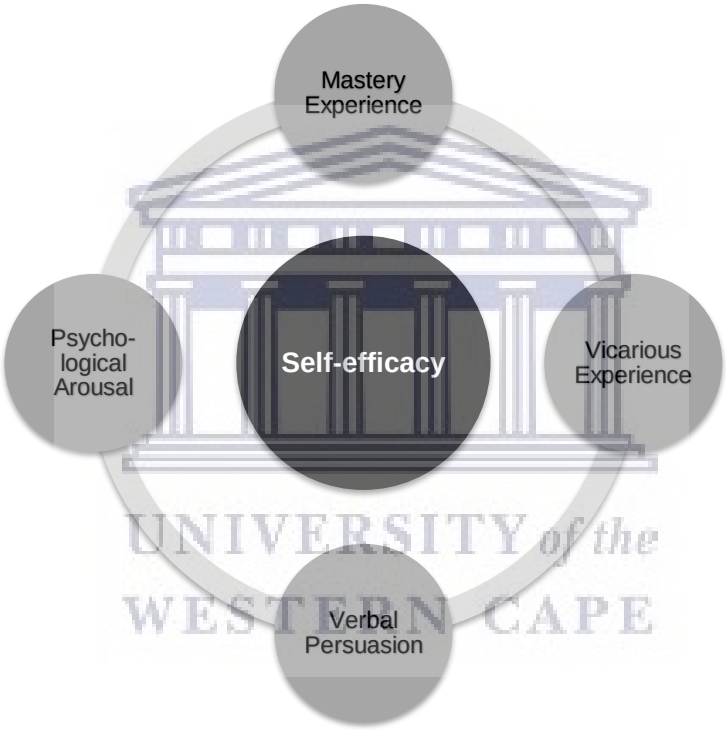

Figure 5. Sources of Self-Efficacy Model

Each one of the components in Bandura's (1997) theory are explained in greater detail in the following section.

2.3.1 MASTERY EXPERIENCE (A.K.A PREVIOUS PERFORMANCE)

The most significant and single greatest contributor to individual self-efficacy, is mastery experience (or previous performance), which is where individuals engage in

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tasks and activities, construe the outcomes of their actions, utilise these understandings to mature beliefs about their capability to participate in future tasks and activities, and act jointly with the beliefs created (Hasan, Hossain & Islam, 2014). When outcomes are construed as successful an individuals' self-efficacy raises, whereas outcomes construed as unsuccessful or failures leads to lowered individual self-efficacy. Kirk, Schutte and Hine (2011) adds to this by stating that successful mastery experience leads to a higher expectation of obtaining favourable outcomes in the future. This means that the more an individual succeeds in a task, the more confident they will be in completing similar tasks in the future. Hasan, Hossain and Islam (2014) states that how individuals interpret their previous achievements or downfalls have major effects on their current self-efficacy levels. For example, graduates who are unsuccessful in one or two job applications may experience reduced self-efficacy as a result. It is important to note that self-efficacy is not created by completing simple tasks, but requires individuals' experience in overcoming difficulties and opposition through maintained resilience and persistence (Maddux, 2002). Therefore, in order to build self-efficacy, graduates require tasks that stretch their current ability levels. Lunenburg (2011) states that in the working world, managers or supervisors can increase an individual's self-efficacy through thorough recruitment processes, providing stimulating and challenging tasks, career path development, coaching and mentoring, goal setting, supportive leadership, and benefits for improvement. This approach can be used fruitfully in the university setting to promote the mastery experience of graduates. This could be done by taking graduates through development centres that introduce recruitment techniques (such as competency-based interviews and resume development), real-life simulations (such as in-basket assessments and focus groups), receiving developmental feedback, and role modelling that inspires graduate career development and progression. Practical interventions and programs, like development centres, that is closely related to working experiences and activities give graduates the necessary exposure they require, boosting their confidence when approaching the job search and application process. Co-curricular incentivising such as certified programs that add value to graduate experience and resumes can also lead to increased opportunities of employability which increases graduate self-efficacy.

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2.3.2 VICARIOUS EXPERIENCE (A.K.A MODELLING)

Vicarious experience, also known as modelling, is where individuals form their self-efficacy through observing other individuals (Hasan, Hossain & Islam, 2014). Compared to mastery experience, vicarious experience is less significant in developing an individual's self-efficacy. However, when individuals have limited previous experience or lack insight about their own capabilities, they become more sensitive to modelling others (Pajares, 2002). According to Hasan, Hossain and Islam (2014) and Pajares (2002), an individual's self-efficacy can be increased through modelling when:

- individuals observe others who are similar in nature and have similar characteristics as themselves;
- the observed individual can show them better ways of doing things or their performance which impacts them positively;
- the individual observes themselves succeed (i.e. watching videos of achievements and successes); and
- the observed individual has qualities the individual admires or aspires to attain.

Thus, when individuals observe role models who are successful, it then leads to an increased expectation of future success for themselves, consequently increasing their self-efficacy (Kirk, Schutte & Hine, 2011). Development centres pose an opportunity for graduates to learn vicariously through real life simulations and scenarios, role plays, observer feedback and demonstrations. By vicariously experiencing development centre interventions, graduates are able to gain insight into what to expect in the working environment. For example, competency-based interview assessments can prepare graduates on what to expect when going for real-life interviews and in turn what organisations expect of them. By observing and role modelling behaviour learnt in development centre interventions, graduates should be more confident in their ability to apply their learnings in the world of work. On the other hand, an individual's self-efficacy can decrease through modeling when individuals observe others who are vastly different from them; or when the observed individuals are similar in their attributes but fails, which leaves the individual doubtful of their abilities (Hasan, Hossain & Islam, 2014; Pajares, 2002).

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2.3.3 VERBAL PERSUASION (A.K.A SOCIAL PERSUASION)

Self-efficacy can be developed when individuals are affected by the verbal or social persuasions of others. Verbal persuasion, or the assurance by others that an individual can attain an outcome successfully, leads to an increase in self-efficacy (Kirk, Schutte & Hine, 2011). Although appraising and empowering may raise self-efficacy, negative feedback may have the opposite effect, namely lowering self-efficacy (Pajares, 2002). Research has, however, denoted that when a leader is confident in their employee successfully performing a task, the employee will then perform at a higher level (Eden, 2013). The same ideology can be applied in university settings by using techniques such as the goal setting theory. This theory states that more challenging or higher goals leads to higher performance when compared to easier goals (Latham & Locke, 2018). Universities can apply this theory by providing students with more challenging tasks or assignments when they successfully accomplish current tasks. Moreover, scaffolding learning theory could also be beneficial in learning pedagogies. According to Winstone and Millward (2012), scaffolding is described as the structured support that teachers provide to students to assist them in accomplishing at a higher level and the ability to continue at that level once the structured support is no longer provided. Both theories would require high quality feedback for learners to apply and develop a sense of self-awareness. Development centres would also enhance this experience by providing various levels of feedback, such as feedback from an observer, lecturer, peer or participant, or role model in the development centre intervention. However, the power of this persuasion would be dependent on the leader's credibility, past relations with the individual, and the leader's influence in their environment (Eden, 2003). Hasan, Hossain and Islam (2014) concurs by stating that persuasive communication and appraisals are most effective when the information is realistic and when the individuals who give this information are observed by others as knowledgeable, and dependable. Moreover, Lunenburg (2011) states that the best method a leader can utilise for verbal persuasion is through the Pygmalion effect, which is known as a form of self-fulfilling revelation in which deeming something to be true can make it true. Hence, when a manager believes an employee to effectively execute on an assignment, the employee's performance positively increases.

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2.3.4 PHYSIOLOGICAL AROUSAL (A.K.A SOMATIC AND EMOTIONAL STATES)

Physiological and emotional arousal can be elicited in varying intensities as a source of self-efficacy (Flavell & Ross, 1981). Individuals can gauge their degree of self-efficacy by their emotional state experienced as they consider an action (Pajares, 2002). Pajares (2002) goes on to state that strong emotional reactions to a situation or activity provide signs about the expected success or failure of the outcome. For example, sweaty palms are generally associated with being nervous or afraid. While individuals have the ability to adjust their own rational and emotional states, those with a high sense of self-efficacy, can interpret a state of pressure as revitalising in the face of adversity, whereas those who have self-doubt or insecurities interpret their pressure as a weakness (Hasan, Hossain & Islam, 2014). Many theories have been related to self-efficacy, such as Edwin Locke and Gary Latham proposing that goal-setting and self-efficacy goes hand in hand (Lunenburg, 2011). This theory proposes that when a leader sets challenging goals for employees, it leads to an increase in an employee's self-efficacy, leading them to set even higher goals for their own performance.

With self-efficacy being included in positive psychology theories, it also forms part of one of the four Psychological Capital (PsyCap) dimensions pioneered by Fred Luthans. These dimensions are: hope, optimism, resilience and efficacy. Luthans, Youssef and Avolio (2007) define PsyCap as:

"an individual's positive psychological state of development that is characterized by: (1) having confidence (self- efficacy) to take on and put in the necessary effort to succeed at challenging tasks; (2) making a positive attribution (optimism) about succeeding now and in the future; (3) persevering toward goals and, when necessary, redirecting paths to goals (hope) in order to succeed; and (4) when beset by problems and adversity, sustaining and bouncing back and beyond (resiliency) to attain success"

According to a South African study by Rothmann (2003), PsyCap constructs, like confidence, could have a reconciling impact on job and individual stress, work engagement, and burnout. Individuals with high levels of efficacy have characteristics such as: (1) setting key objectives and readily taking on challenging responsibilities for accomplishing those objectives; (2) encounter challenges and work hard to accomplish those objectives; (3) have a high level of motivation; (4) make any effort

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to attain their objectives; and (5) persevere when encountered with difficulties and obstacles (Luthans & Avolio, 2007, p. 54). It is clear that self-efficacy impacts an individual's motivation and effort to action tasks, productivity, and perseverance to get through challenges. Bandura (1995) mentions that by stating that self-efficacy can significantly influence how people feel, conceptualise, act, and stimulate their thoughts.

Moreover, self-efficacy is not a trait acquired by certain individuals, but can be attained by anyone. One of the groups of individuals that can gain value from increased levels of self-efficacy is student graduates. Graduates face numerous academic, personal and professional challenges as they prepare themselves for the world of work. For this reason, universities should assist their students in developing the necessary competencies and skills that the work environment requires, such as resilience, personal mastery and self-efficacy. Impactful platforms that could be utilised to assist in graduate development are platforms such as work integrated learning (Freudenberg, Cameron & Brimble, 2010), positive role-modelling, competency-based curriculum (Muraraneza, Mtshali, & Mukamana, 2017), and Development Centres. Development centres can be a valuable approach for graduate development as the process allows for simulation of real-world scenarios, competencies, and skillsets required in today's 21st century workforce (Garavan, 2007). Development centre interventions can stimulate graduates in their preparation of what to expect from the world of work, develop their self-awareness to in turn enhance their capabilities, upskill them for future employment events (such as interviewing and assessment selection processes), and increase their performance and confidence in work tasks. The aim of development centres in this study is to increase graduate self-efficacy with the presumption that the gained efficacy will positively and distinctly impact various interdependent events in a graduate's career. The next section will breakdown development centres in further detail.

2.2 COMPETENCY-BASED ASSESSMENTS

Competency-based assessments are popular in South Africa to assess managerial and graduate potential. It is believed that South Africa is the third largest user of assessment and development centres amongst 82 other countries internationally (Mulder & Taylor, 2015). The approach's popularity in South Africa can be ascribed

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to a number of factors, but one of the biggest drivers is the gap in quality education and formal training between various racial groups. Standardised assessments, especially those related to the assessment of cognitive ability, often highlights the contrast in education quality. In light of South Africa's history, perceived fairness and cultural appropriateness is very important. The use of psychological measures are also legally mandated by the Health Professions Act (Republic of South Africa, 1974), and their use is restricted if they are not able to demonstrate ethnic and gender fairness. Generally, competency-based assessments are regarded as fairer by participants due the high degree of fidelity between the simulations and real-world work situation. Additionally, competency-based assessments are strongly linked to current and future job performance (Al-Mannaee & Ryan, 2018).

As highly valued processes, assessment and development centres are actively utilised for purposes such as recruitment, development, and retaining talent within organisations (Callow, 2010). These multi-purpose centres are known as a standardised process whereby multiple raters evaluate participant's performance against pre-defined competencies which are assessed through a series of job-related simulations (Appelbaum, Kay & Shapiro, 1989). These pre-defined competencies are related to the requirements and behaviours of a specific role. In relation to this study, the development centre process usually occurs over a day or number of days where participants are actively participating in the assessment of their own behaviours and those involved, which forms part of their professional development (Ballantyne & Povah, 2017).

These centres have evolved rapidly over the past few decades. Not only have competency modelling changed, but also the technology that is used within assessment and development centres. Presently, assessments may be conducted either by utilising the paper-pencil based technique or through electronic (simulated) assessment, thereby presenting graduates the opportunity to 'display their competencies in the given tasks' (Mohamad, Dahlan, Talmizie, Rizman, & Rabi'ah, 2013). According to Minty (2018), simulated assessments is recommended despite both techniques having their advantages and disadvantages. Simulated assessments are easier to coordinate and compile, while paper-pencil based assessments are seen as more labour intensive and time-consuming. Moreover, Desai (2006) concurs that institutions can be successful in introducing paperless, online portfolio's and digital

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recordings, all of which would advance the perception of assessments by graduates and industries. Despite the technique utilised in assessment centres, there are many advantages these centres can offer in general.

According to Strudwick (2017), assessment and development centres have many advantages, such as: (1) being able to measure complex characteristics, (2) seen as face valid and fair by those who participate in them, (3) has diminutive adverse impact, and (4) predicts a variety of criteria. The main difference between an assessment and development centres is that the former is utilised for selection purposes and the latter for personal and professional development purposes, which leads to organisational and team development (Sukalova & Hraskova, 2006). Figure 5 below depicts the key characteristic differences between assessment centres and development centres. It is clear that the goal of an assessment centre is to achieve present needs in the organisation, where development centres are focused on the longer-term potential of employees.

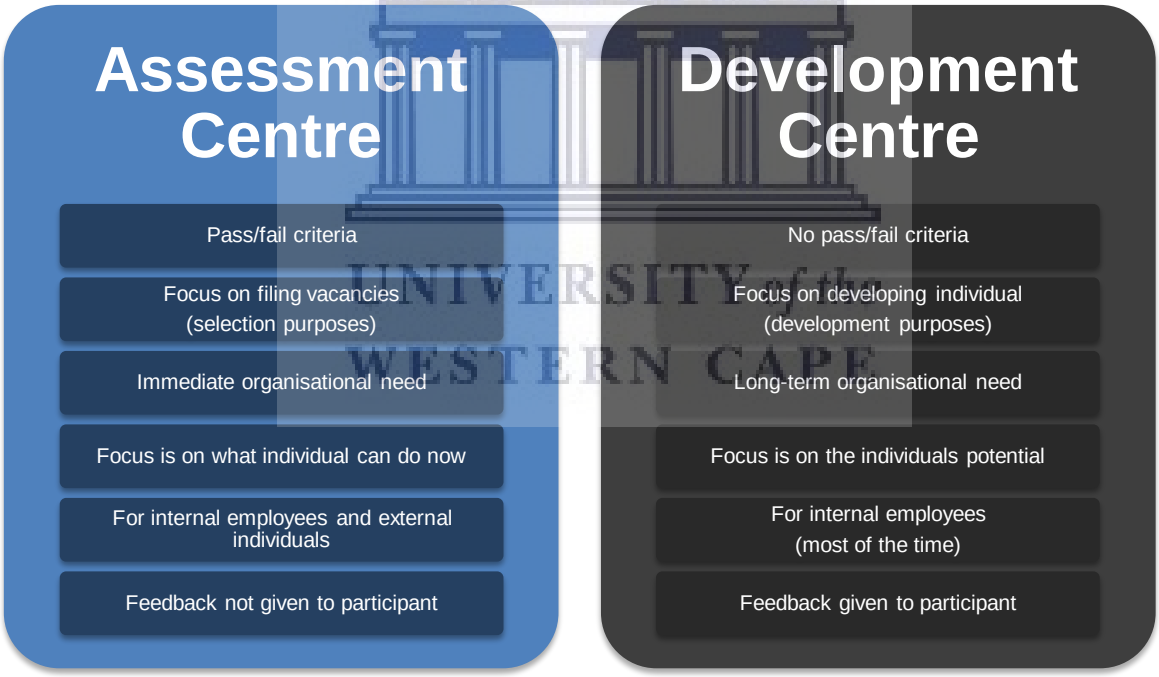

Figure 6. Main differences between Assessment and Development Centres. Adapted from "Development Centres: Psychometric Assessment:" by Niche Consulting, 2013 (http://www.nicheconsulting.co.nz/psychometric_ assessment/for_development/development_centres.htm). Copyright 2013 by Niche Consulting Limited.

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Organisations benefit from development centres in aspects such as (1) being seen as impartial and a robust approach to enhancing the employees' and the organisations' awareness of the individual's skills, strength and development areas, (2) by providing a unique opportunity to objectively observe and evaluate how employees execute tasks and activities, make decisions, relate to others and exhibit self-awareness, and (3) acting as an effective tool for determining essential behaviours that are seen as imperative to employees' current success and future potential (Sukalova & Hraskova, 2006). These same benefits may be beneficial in a classroom environment if development centres provide graduates with the opportunity to learn new skills, acting as a source of career preparation, boosting student confidence by developing self-awareness and tackling blind spots, and acting as an objective resource to develop graduate attributes required by vocations. The next section will look at the link between self-efficacy and development centres by framing the research problem and objectives in this study.

2.5 THE LINK BETWEEN SELF-EFFICACY AND DEVELOPMENT CENTRES

2.5.1 THEORETICAL MODEL

Graduate self-efficacy is vital to academic and employability success since it is instrumental in overcoming obstacles, managing stressful situations and achieving personal and professional goals. General research findings support this assumption, stating that the level of one's self-efficacy has an influence on changes in behaviour, stress management, and academic and career choices (Gharetepeh et al., 2015; Juan, Hannan & Namome, 2018; Pajares, 2003). On the other hand, those who have a weaker sense of self-efficacy have low ambitions and weaker commitment to goals, retreat from difficult tasks, dwell on adversity, are slow to gain confidence after experiencing failure, and easily encounter stress and depression.

The role of self-efficacy is important to graduate career and academic progression. While graduates face various stressors, such as juggling their academics, job search challenges, poor paying career opportunities and more, their performance and belief in obtaining academic and professional success can at times be tested. Bandura (1997) expresses self-efficacy as a critical component in the amount of effort and perseverance applied to activities and tasks. This, in essence, speaks to an

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individual's performance and persistence in achieving success in a specific task or situation. Studies conducted by Oriol-Granado, Mendoza-Lira, Covarrubias-Apablaza, Molina-López (2017) concurs by finding higher levels of self-efficacy being a positive predictor of academic engagement and performance, positive emotions, and autonomy support.

As discussed in detail throughout this literature, developing one's self-efficacy yields various benefits that can be applied in diverse situations and tasks, and is an underlying component of employability. According to Blanchard and Thacker (1999), self-efficacy is influenced by past experiences and its consequences leading to success, observing the success and failures of role models, developmental feedback received, and the individual's somatic and emotional state relating to performance beliefs. This touches on Bandura's (1997) four sources of self-efficacy discussed previously. Self-efficacy, along with the sources, are showcased in development centre initiatives. Paton and Jackson (2002) states that development assessment centres act as a source of directly gained experience that incorporates behavioural modelling (which includes several participants), feedback, and opportunities to understand and develop methods of improvement that leads to improvement in self-efficacy, effort and persistence.

This study proposes a theoretical model where development centres act as a useful method to improve graduate self-efficacy, as seen in Figure 6 below. In this model, development centres are grounded in essential graduate employability attributes, appropriate assessment techniques and ongoing development feedback that is applied in university settings. This application of development not only exposes graduates to real-life work simulations that improves their self-awareness and various skills, but creates a higher level of graduate self-efficacy. This sense of higher self-efficacy leads to the belief of successfully applying one's gained knowledge and abilities to prospective career opportunities. Having the belief to apply one's abilities (i.e. self-efficacy) is more significant than merely having the ability (Yorke, 2006).

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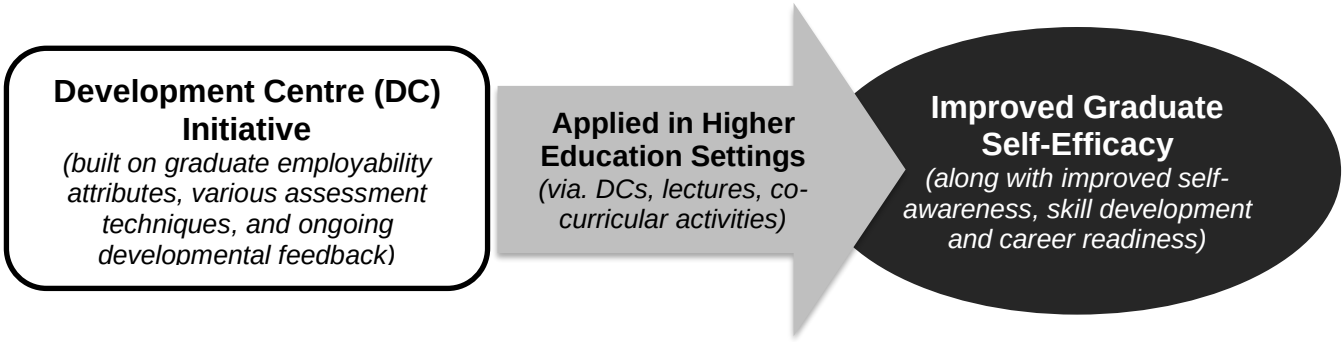

Figure 7. Development Centres as a Method to Improve Graduate Self-Efficacy

Studies conducted by Creed, Bloxsome and Johnston (2001) found employability-enhancing interventions, like training and education, to positively lead to higher levels of confidence and esteem in unemployed individuals. Development centres also act as a source of training and a knowledge sharing tool. These centres provide a platform for graduates to acquire diverse skillsets, be equipped in desired graduate employability attributes and competencies, receive developmental feedback on ways to improve, and gain the confidence and belief to apply learnt abilities for prospective employment opportunities. While programmes and initiatives such as development centres are a useful tool in developing individuals, most of the time these opportunities are voluntary. Thus, graduate willingness to learn, belief in their abilities, and ongoing persistence to develop, are important attributes in achieving personal and professional success.

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With the rapid and pervasive changes in the global, political and economic systems, one of the key success factors is the ability of graduates to continuously learn and remain agile. Xing and Marwala (2017) concurs by mentioning how globalisation, the fourth industrial revolution, the increasing demands for tertiary education, increasing competition, and collapsed geographical restrictions, have forced higher education into an extremely competitive environment where competence and high performance are critical for survival. To add to this pressure, graduates as new employees are expected to add value to organisations from the first day at work (Brits, 2018). This pressure to perform can have a profound impact on graduates and a high level of self-efficacy may be the key differentiator between success and failure. The next section will reflect on the role higher education plays in developing graduate self-efficacy.

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2.5.2 THE ROLE OF HIGHER EDUCATION IN DEVELOPING GRADUATE SELF-EFFICACY

According to Brits (2018), tertiary institutions play a critical role in enhancing both graduate employability and impacting the national economic growth. Education plays a pivotal role in the National Development plan of 2030 to spur growth and broaden employment opportunities. In this regard, higher education in South Africa plays a key enabling function. The Higher Education Quality Committee (HEQC) states that the South African tertiary institutions are responsible for the transformation of producing "quality higher education that develops the capabilities of individual learners for personal enrichment" (Symes, 2006). Although the task for graduate development should not only fall on universities, institutions of higher education plays an important role in preparing the next wave of graduates for the world of work. Moolman (2017) states that tertiary institutions can assist graduates to achieve employability by embedding this concept in learning programmes, lectures, incorporating work experience into the academic curriculum, and introducing development assessment practices. One way in which tertiary institutions can contribute to this transformation is by introducing elements of development centres into their teaching practice, since development centres offers numerous benefits that may improve academic performance and employability (van Wyk & du Toit, 2018). Jacobs, Griswold, Swigart, Loviscky, and Heinen (2018) states that graduates benefit from assessment centres regardless of the career they aspire towards, and provides them with structured feedback that guides their steps towards future development. Moreover, in a decade long study conducted by Jacobs, Griswold, Swigart, Loviscky, and Heinen (2018) they found that assessment centres develop the skills and abilities of all graduates who participate, irrespective of their position. Although the primary goal of development centres is to diagnose the key strengths and weaknesses of participants, one of the most important and overlooked benefits is the development of generalised self-efficacy.

MacDonald (2014) found that by developing graduate problem-solving skills, participants developed an increase in their self-efficacy, creative abilities, and abilities to manage change effectively. Making use of development centre principles like role-modelling and simulating aspects of the job into classroom experience may improve the self-efficacy of students. In this regard, development centres should not be

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regarded as a single standalone event but rather as a teaching pedagogy embedded in the classroom experience. On the other hand, not only does successful development centres benefit participating graduates, but higher education institutions can also benefit by using it as means for recruiting prospective students (Jacobs, Griswold, Swigart, Loviscky, & Heinen, 2018). This is one way in which universities can screen for high quality prospective students and also consider putting these or poor performing students on development plans and initiatives (such as one-on-one development feedback, coaching, assessment activities, career counselling).

Assessment and development centres can thus play a critical role in nurturing important competencies that are needed for job success by creating self-awareness and boosting self-efficacy. This study, therefore, has proposed that development centres have the potential to increase self-knowledge and awareness regarding the strengths and weakness of participants, while boosting self-efficacy in the short and long term. This in turn is likely to improve the employability of students and assist them to make an immediate impact in the organisations that employ them.

2.6 RESEARCH OBJECTIVES AND SUBSTANTIVE HYPOTHESES

The primary objective of the study is to investigate the role of a development centre on generalised self-efficacy of graduate students. The secondary research objective is to investigate if the change in self-efficacy has a short-term or long-term effect.

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Based on the research objectives and the literature review, theorising suggests that graduate self-efficacy will increase over the short and long term once the graduates have gone through a development centre intervention. This study will thus propose the following specific hypotheses:

Hypotheses 1: A development centre intervention has a short term effect on the generalised self-efficacy of graduate students.

Hypotheses 2: A development centre intervention has a long term effect on the generalised self-efficacy of graduate students.

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2.7 CONCLUSION

The aim of this chapter was to frame the research initiating question in the context of competency-based assessments and the development of core self-efficacy. This study argues for the importance of self-insight that can be gained through the use of development centre methodologies. An added advantage of the developmental centre approach is the potential short- and long-term improvement in generalised self-efficacy. Self-efficacy is particularly important for young graduates since it provides them with confidence and self believe to master a variety of skills in a relatively short period of time. This is a critical skill for young graduates that will enable them to make an immediate impact in the organisations that employ them. Various studies in this chapter indicated that generalised self-efficacy is critical for graduate success and employability. The literature outlined that developing confident graduates leads them to be more courageous in taking risks and making better decisions, being able to tackle challenges more efficiently, set stimulating goals and commit to them, experience lower levels of stress, anxiety and depression, and puts more effort and perseverance into learning challenging tasks (Bandura, 1994; Luthans & Avolio, 2007, p. 54). This research study focused on graduate students who were in process of completing their honours degree in Industrial Organisational Psychology at a selected institution of higher education in the Western Cape. Moreover, the goal of the study was to investigate if generalised self-efficacy can be amplified in the short and long term through a development centre intervention. The subsequent chapter will outline the research design and methodology utilised to test these hypotheses.

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CHAPTER THREE: RESEARCH DESIGN AND METHODOLOGY

3.1 INTRODUCTION

This chapter identifies the methodology and design of the research study, the population and sample of the research, as well as the data collection procedures and research procedures. This chapter will also discuss the main statistical approaches that will be used to operationalise the substantive research hypotheses. Finally, the measures that was used to operationalise the latent variables will be discussed in sufficient detail.

3.2 RESEARCH DESIGN

Simply put, the research design of a study is the plan of what the study will do to answer the research questions and objectives (Saunders, Lewis & Thornhill, 2012). It is important that the research design is accurately identified for successful research quality, interpretation and execution. While there are currently two broad research approaches in the social sciences, namely quantitative and qualitative research, this research study will opt for the former throughout the study. This research study will therefore follow a quantitative research paradigm, by using a quasi-experimental approach. According to Terre Blanche, Durrheim and Painter (2016), a paradigm is regarded as an all-encompassing system of interconnected practices and thinking that define for researchers the nature of their enquiry along three facets, namely, ontology, epistemology, and methodology. These facets are further explained by Terre Blanche, Durrheim and Painter (2016) as:

1. **Ontology**, specifies the nature of reality that is to be studied, and what can be known about it;
2. **Epistemology**, specifies the nature of the relationship between the researcher (knower) and what can be known; and lastly
3. **Methodology**, specifies how researchers may practically go about studying whatever they believe can be known.

In light of the above, it is clear that paradigms provide a foundation for the research and also assist researchers to committing to particular approaches of data collection,

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analysis and interpretation. While each of the primary paradigms has specific derivatives, such as positivists, interpretive, and constructionist approaches, for the purposes of this research, the positivist approach will be followed. Positivism is an objective and observable approach of facts that can be a basis of science (Creswell, Ebersohn, Eloff, Ferreira, Ivankova, Jansen, Nieuwenhuis, Pietersen & Plano Clark, 2016). Furthermore, this study's epistemology follows empiricism which looks into empirical knowledge. According to Hallebone and Priest (2009), empiricism assents to individual experiences associated with observation, behaviours and senses as an acceptable source of knowledge. These paradigms and facets will be further unpacked throughout this chapter.

As mentioned, this study will follow a quantitative experimental design, more specifically, an evaluation approach. According to Turner, Miller and Moses (1989) an evaluation study design is known as a:

> *systematic process that produces a trustworthy account of what was attempted and why; through the examination of results -the outcomes of intervention programs- it answers the questions, "What was done?" "To whom, and how?" and "What outcomes were observed?" Well-designed evaluation permits us to draw inferences from the data and addresses the difficult question: "What do the outcomes mean?*

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It is clear from the above that this type of study will follow a process of collating data and information on the *what, why, who* and *how* of the research study, while being able to draw conclusions of the effectiveness of the intervention conducted. As there are many types of evaluation studies, this research study will follow a pre-post study design. Thiese (2014) states that a pre-post design measures the effect of an intervention both before and after a intervention is employed. This pre-post design will focus on intervening with two groups, namely, a control group and a treatment group. The intervention in this research study will be implementing a development centre to graduate students in an exit level course at a prominent tertiary training institution, with the pre-post measure being a self-efficacy questionnaire.

3.3 RESEARCH PARTICIPANTS

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3.3.1 POPULATION AND SAMPLE

According to Bryman, Bell, Hirschsohn, dos Santos, du Toit, Masenge, van Aardt, and Wagner (2014, p. 170), a population can be referred to as "the universe of units, like people, nations, cities, regions, firms, etc., from which the sample is to be selected." The population for this study consisted of graduate students who were in the process of completing their graduate studies in South Africa. The sample consisted of 95 honours students. With regards to the sample, Bryman et al. (2014, p. 170) defines a sample as "the segment or subset of the population that is selected for investigation". Out of the total number of 95 honours students, 17 graduate students volunteered to partake in the research project.

3.3.2 SAMPLE SOCIODEMOGRAPHIC CHARACTERISTICS

The below table (*Table 1*) represents the study sample characteristics for both the control group and the intervention group. This table outlines the study sample's gender, race, nationality, marital status, home language and work experience. The total of this study sample is n=17.

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Table 1. Sample Sociodemographic Characteristics

	Control Group (n = 10)		Intervention Group (n = 7)	
Variable	**Frequency**	**Percentage**	**Frequency**	**Percentage**
Gender				
Male	3	30.0%	4	57.1%
Female	7	70.0%	3	42.9%
Race				
Black/African	2	20.0%	3	42.9%
Coloured	8	80.0%	2	28.6%
Indian	0	0.0%	1	14.3%
White	0	0.0%	1	14.3%
Nationality				
South Africa	9	90.0%	6	85.7%
Zimbabwe	1	10.0%	1	14.3%
Marital Status				
Married	2	20.0%	1	14.3%
Single	8	80.0%	6	85.7%
Home Language				
English	6	60.0%	2	28.6%
Afrikaans	2	20.0%	2	28.6%
Shona	0	0.0%	1	14.3%
Swati	0	0.0%	1	14.3%
Zulu	0	0.0%	1	14.3%
Xhosa	1	10.0%	0	0.0%
Ikwerre	1	10.0%	0	0.0%
Work Experience				
None	2	20.0%	1	14.3%
<6 months	3	30.0%	2	28.6%
>12months	5	50.0%	4	57.1%

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3.3.3 SAMPLING TECHNIQUE

Due to the nature of the study, a non-probability convenience sampling technique was used. Non-probability sampling can be referred to as “a sample that has not been selected using a random sample selection method; this implies that some units in the population are more likely to be selected than others” (Bryman et al., 2014, p. 178). This type of sampling is one that is readily available to the researcher by virtue of its accessibility (Bryman et al., 2014, p. 178). Moreover, another common motive for utilising non-probability sampling is that it is more cost-effective and can be employed quicker than probability sampling (Ilker, Sulaiman & Rukayya, 2016). However, the

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non-probability sampling technique is not fully randomised, resulting in a sample that is not a true representation of the population and thus cannot be generalised (Laerd Dissertation, 2012). Moreover, this study utilised the purposive sampling technique. Purposive sampling is a method where participants are chosen based on their understanding about a phenomenon of interest, experiences and keenness to take part (Etikan, Musa & Akasia, 2015; Robinson, 2014).

3.3.3 INCLUSION CRITERIA

In order for participants to partake in the research study, they needed to be part of the defined population sample. That is, the participants were required to be in their honours year in industrial psychology. The sample was defined and restricted to the given group of final year students in order to control any possible sources of extraneous variance, which the researcher may not have been aware of when designing the study.

3.4 DATA COLLECTION METHODS

In this particular study, two methods of data techniques/instruments were utilised, namely questionnaires, and a development centre exercise as the intervention. The development centre consisted of an in-basket assessment and a competency-based interview. The individual measures will be explained in more detail in the section below.

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3.4.1 DEMOGRAPHIC QUESTIONNAIRE

In this research study, a demographic questionnaire was utilised to provide statistical information regarding the research participants that participated in the study. This is utilised in order to capture the background information of the participants, and also to further contextualise the findings. The demographic questionnaire presents questions, such as the participant's age, gender, nationality, race, work experience, marital status, principal home language, individual's belief of their readiness for the work environment, and current employment status. For further information, please refer to *Appendix C: Demographic Questionnaire* on page 91.

3.4.2 GENERALISED SELF-EFFICACY QUESTIONNAIRE

The pre and post study technique utilised the Generalised Self-Efficacy questionnaire (Schwarzer & Jerusalem, 1995) which measured the participant's general self-efficacy

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levels. While Bandura's self-efficacy questionnaire follows a more situation specific approach, Schwarzer and Jerusalem (1995) follow a general self-efficacy approach (Schwarzer, 2014) . The general self-efficacy questionnaire is based on an individual's general beliefs in their ability to respond to and manage environmental demands and challenges (Schwarzer, 2014). This instrument consisted of a 10-item self-reported questionnaire, which takes ±2-4 minutes to answer. Moreover, these items were scored on a 4-point Likert Scale with 1 being 'not at all true', 2 being 'hardly true', 3 being 'moderately true', and 4 being 'exactly true'. The instrument generally supports strong internal consistency and Cronbach alpha values ranging between .75 and .91 have been reported in applied studies (Scholz, Gutiérrez Doña, Sud & Schwarzer, 2002). Further research conducted by Scholz, Gutiérrez Doña, Sud & Schwarzer (2002) indicates that the generalised self-efficacy scale only has one global dimension. In addition to this, the criterion-related validity of the instrument correlates positively with favourable emotions, optimisms, and work satisfaction (GSE, n.d.). On the other hand, negative correlations were identified with self-efficacy and depression, anxiety, burnout, stress, and health complaints (GSE, n.d.). These findings generally provide support for the divergent and convergent validity of the measure. The measure is conceptualised to be uni-dimensional and include questions such as "It is easy for me to stick to my aims and accomplish my goals", "I can solve most problems if I invest the necessary effort", and "When I am confronted with a problem, I can usually find several solutions". For a view of the instrument used refer to page 91, *Appendix D: Generalised Self-efficacy Questionnaire*.

3.4.3 DEVELOPMENT CENTRE INTERVENTION

Assessment and development centres are commonly utilised for selection and developmental purposes (Woodruffe, 1995). These centres assess individuals through the use of simulation activities to observe explicit behaviours against predefined competencies (Thornton III & Rupp, 2006).

Development centres include activities such as psychometric testing and simulation exercises. For this study, the development centre intervention included an in-basket assessment and a competency-based interview. An in-basket assessment is a tool and activity used for potential managers to see how an applicant performs job-related duties within a given timeframe (Roberts, 2018). In-basket assessments require

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applicants to take action and structure a response of an employee in a hypothetical position on items such as e-mails, memos, reports, records, and meeting minutes' requests (Schippmann, Prien, & Katz, 1990). Moreover, competency-based interviews, also known as structured interviews, are interviews that have questions designed to elicit responses that allow the interviewers to measure the candidate against the competency profile developed for the position being interviewed for (Warech, 2002). The assessment tools utilised in the intervention were derived from examples provided by the psychometrics lecturer, which was done by the researcher as part of Masters level module in Industrial Psychology. Hence the validity of the assessment has not been tested or confirmed.

This study comprised of four key roles which include one researcher, two study supervisors, five raters, and seventeen Honours graduates acting as the study sample (ten of which were part of the control group, and seven of which were part of the intervention group). The researcher and raters are involved in the Masters Industrial Psychology class, while the study supervisors were lectures who hosted and supervised the intervention alongside the researcher.

For the purpose of this study, only the intervention group participated in the actual development centre intervention. The intervention group completed a pre-test questionnaire (i.e. self-efficacy questionnaire), an in-basket assessment, a competency-based interview, and a post-test questionnaire (i.e. self-efficacy questionnaire). The control group completed the generalised self-efficacy questionnaire prior to the start of the development centre intervention. Thereafter, the 3-month post-test questionnaire was emailed to participants who had participated in both intervention and control groups to complete via Google forms.

The development centre was made up of six raters. These raters were Master students in Industrial Psychology that were trained on frame of reference training by a qualified assessments lecturer. Raters worked in pairs, with each pair assessing 3 candidates for the in-basket and competency-based interview. An observer guide was developed as preparation material for each rater (refer to *Appendix F: Assessment Centre Observer Guide,* on page 94). This guide contained the assessment competency guide, assessment material, observer programme, and rating sheets.

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The in-basket and competency-based interview assessments were developed to assess ten main competencies. These competencies are relevant knowledge, planning and organising, oral and written communication, action orientation, ability to learn, attention to detail, analytical thinking, adaptability, and initiative. The competencies were derived by reviewing various job descriptions of an Industrial Psychology entry level professional. Moreover, Industrial Psychologists across various organisations were consulted on their perspective of core competencies that graduate Industrial Psychologists require. This was then cross referenced and analyzed against universal competencies in order to derive the final competencies as per the Competency Grid below.

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Table 2. Competency Grid

Competencies	Assessments	
	In-Basket Activity	**Competency-Based Interview**
Relevant knowledge and skill *Possessing the necessary knowledge and skills to meet the job demands.*	X	X
Planning and organizing *Organising information and determining courses of action for oneself and others, taking relevant factors into account.*	X	X
Communication – Oral *Effective two-way communication with others, including verbal and gestural expression, and listening.*	---	X
Communication – Written *Clear written expression of ideas or information.*	X	---
Action Orientation *Willingness to take action to accomplish tasks, maintaining a high level of motivation and energy.*	X	X
Ability to learn *Ability to assimilate, understand and apply new information.*	---	X
Attention to detail *Taking relevant and complex details into account.*	X	X
Analytical thinking *Understanding a situation by breaking it apart into smaller pieces or tracking the implications of situations in a step by step way.*	X	X
Adaptability *Maintaining effectiveness in varying environments and with different people, tasks and responsibilities.*	X	X
Initiative *Originating action and taking the initiative without having to be prompted.*	X	X

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The assessments were rated on a 5-point Likert scale. The competencies and respective behavioural indicators were utilised as a guide when rating participants, while the rater utilised a Behavioural Observation Scale (BOS) approach. The 5-point

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Likert scale rated 1, being well below requirements or no evidence of behavioural indicator or response, 5, being well above requirements or answers all behavioural indicators and does much more than required. To view the rating guide, please refer to *Appendix F: Assessment Centre Observer Guide* on page 94.

Once all simulations had been conducted, the raters were required to go through a data-integration session where participants were rated, and scoring was finalised. The data-integration session was where the raters came to a consensus around participant scores by comparing participant results that were aligned to the agreed competencies and behaviours. Thereafter, participant development reports were written, password protected, and sent through emails directly to the researcher and supervisor to send out to the respective participants.

3.5 DATA COLLECTION AND ANALYSIS

The research study collected and analysed the data and information by following the below steps. Figure 7 graphically displays the research study process, which is broken down further thereafter.

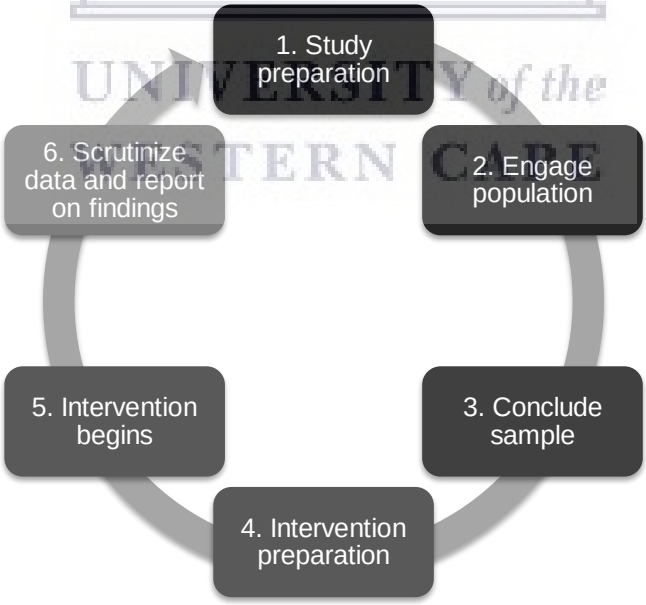

Figure 8. Research Study Process

1. **Study preparation:** The first step is to obtain all information in order to conduct the intervention. The researcher collected resources such as the population's

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class schedules and class registers, which was obtained from the department administrator. These sources of information assisted in setting up suitable times and dates to set up engagement sessions to communicate to the population about the intervention opportunity. In order to proceed with the engagement sessions, the researcher approached respective lecturers to obtain approval to conduct the sessions. An agreement form that the lecturers were required to sign can be found on page 93, *Appendix E: Lecturer Agreement Form.*

2. **Engage population:** Once lecturer approval was received, the engagement sessions took place. The sessions lasted for no longer than 20 minutes. It outlined the purpose of the opportunity, why graduates should get involved, what the opportunity will offer on the day, how to get involved, the researcher details (i.e. date, time and venue of intervention, contact details), and disclosed that the opportunity would involve a control group and an intervention group, and what each group encompasses. The intervention targeted max 40 graduates as the sample size, and worked on a first come first serve basis to get involved. The first few signed up graduates were assigned to the intervention group, while all applicants thereafter was considered under the control group. Moreover, to be fair to all those applying, the application process opened and closed at a specific date and time.

3. **Conclude sample:** Once the sample was obtained from the applications, a congratulatory email was sent to both groups from a specific email address created for this study, along with the development centre programme details. Refer to *Appendix A.1: Informed Consent Form for Intervention Group* on page 88, and *Appendix A.2: Informed Consent Form for Control Group* on page 89. All those individuals who did not apply in time received a regret/apology email explaining that the programme is full and/or they did not apply in time. In the week of and at least 48 hours prior to the intervention day another email was sent to all the participants as a reminder of the programme coming up.

4. **Intervention preparation:** Here the researcher ensured that all materials were ready, venues booked and set up, lunch ordered and ready for delivery, refreshments were prepared, all participants were reminded of the event, and the researcher's supervisors were briefed on process.

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5. **Intervention begins:** The researcher followed an ethical and fair procedure by conducting the intervention at the participant's study location and administered all procedures. On the day of the intervention, the intervention group was required to complete the informed consent form, self-efficacy questionnaire (pre-test), a demographic questionnaire, and go through the development centre programme (further explained in *3.4 Data Collection Methods* under point *3.4.3 Development Centre Intervention* on page 44). The control group was required to complete the informed consent form, self-efficacy questionnaire (pre-test), and a demographic questionnaire only. Three months later both intervention and control groups were given their three-month post-test self-efficacy questionnaire to complete. Once the intervention concluded, each participant received an email thanking them for their participation in the study, while the intervention group additionally received an assessment report for their participation in the development centre. Due to the nature, budget and timeframe to conduct the quasi-experimental study, the researcher could not afford the control group the opportunity to participate in a development centre process post completion of the study. However, the entire targeted population had the opportunity to either participate in the intervention process or to participate in control group process.

6. **Scrutinise data and report on findings:** After all data was received, the researcher reviewed, analysed and contextualised the data through excel and SPSS (IBM Corp, 2015) to report on the findings in Chapter 4 of this review.

3.6 ETHICAL CONSIDERATIONS

According to Nation (1997) ethics is the discipline of dealing with what is right and wrong within an ethical framework developed on obligation and responsibility. In light of this, anonymity and confidentiality was taken into account. This was clearly stated in the informed consent form, explaining the purpose of the study and researcher details, that the participant will remain anonymous, that responses in the study will remain confidential and any personal identity will not be shared with any third parties or vendors. In addition to this, a research participation form will be drawn up as written evidence that the participant has signed and agreed to their voluntary participation in

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the study, also while ensuring confidentiality and anonymity of the study. Please refer to *Appendix A.1: Informed Consent Form for Intervention Group* on page 88, and *Appendix A.2: Informed Consent Form for Control Group* on page 89, and *Appendix B: Research Participation Form* on page 90 for an in-depth outline of the information given to the research participants.

3.7 CONCLUSION

In concluding, this chapter delved into the detail of the research study design and methodology. The chapter explained the methodology and design of the research study, the population and sample of the research, as well as the data collection procedures and data collection and analysis procedures. The chapter ended off with the ethical aspects that the study considered relevant and important that governed the data collection and analysis procedure.

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CHAPTER FOUR: RESULTS

4.1 INTRODUCTION

This chapter aims to present the statistical analyses of the intervention study results. The chapter will start by displaying the sample sociodemographic characteristics. Thereafter, the hypotheses testing will breakdown the research findings obtained by the non-parametric tests.

4.2 HYPOTHESES TESTING

The primary goal of the study was to investigate the following hypotheses:

Hypotheses 1: A development centre intervention has a short term effect on the generalised self-efficacy of graduate students.

Hypotheses 2: A development centre intervention has a long term effect on the generalised self-efficacy of graduate students.

In order to test these hypotheses, a within-between research design was utilised. The first step was to test if there were any significant intergroup differences at time 1 and 3 between the control and intervention groups. This was done by means of the Mann-Whitney U test, a non-parametric test, due to the small sample sizes of the control and intervention groups.

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The "within" part of the research design was carried out using the Friedman Test followed by the Wilcoxon signed rank test. In each of the analyses, time 1 (pre-intervention) was used as the baseline measure. In other words, the immediate effect was assessed by comparing time 1 with 2 and time 1 with time 3. If the Wilcoxon signed ranks indicate a significant change between time 1 and time 2, this change can be considered a significant immediate effect. If the change between time 1 and 3 is significant, it is considered a significant long-term effect.

4.2.1 MANN-WHITNEY U TEST

The Mann-Whitney U test is the non-parametric test that is utilised to differentiate two sample means that come from the same population, and to test if two sample means

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are equal or not (Statistics Solutions, 2019). In this study, we measured the first time (SE_T1) when both intervention and control groups took the self-efficacy survey, and the last time (SE_T3) they took the survey, which was 3 months after the intervention.

The information in *Tables 3. and 4.* suggest that that for time 1 (SE_T1), the Mann-Whitney U Test revealed that there was no statistically significant difference in the mean scores in the graduate's self-efficacy levels for the intervention group (Mean Rank = 9,14; N = 7) compared to the control group (Mean Rank = 8,90; N = 10); (U = 34,000; z = -0,098; p = 0.922; r = -0,00033).

In *Table 3. Ranks table* and *Table 4. Test Statistics table,* it states that for time 3 (SE_T3), the Mann-Whitney U Test revealed that there was no statistically significant difference in the graduate's self-efficacy levels for the intervention group (Mean Rank = 10,50; N = 6) and the control group (Mean Rank = 7,30; N = 10); (U = 18,000; z = -1,319; p = 0.187; r = -0,00456).

Table 3. Ranks table

Group		N	Mean Rank	Mean Values	Sum of Ranks
SE_T1 FACTOR SCORE SE	1 INTERVENTION	**7**	**9,14**	**3,4429**	64,00
	2 CONTROL	**10**	**8,90**	**3,4100**	89,00
	Total	17			
SE_T3 FACTOR SCORE SE	1 INTERVENTION	**7**	**10,50**	**3,6667**	63,00
	2 CONTROL	**10**	**7,30**	**3,4300**	73,00
	Total	17			

Table 4. Test Statistics table

	SE_T1 FACTOR SCORE SE	SE_T3 FACTOR SCORE SE
Mann-Whitney U	34,000	18,000
Wilcoxon W	89,000	73,000
Z	**-0,098**	**-1,319**
Asymp. Sig. (2-tailed)	**0,922**	**0,187**
Exact Sig. [2*(1-tailed Sig.)]	.962[b]	.220[b]

b. Not corrected for ties.

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The results from the foregoing analyses suggests that there were no statistically significant differences between the control and intervention group on generalised self-efficacy at time 1 and time 3.

4.2.2 FRIEDMAN TEST

The Friedman test is the non-parametric test which is an alternative to the one-way ANOVA with repeated measures. This test is utilised to test for differences between groups when the dependent variable being measured is ordinal (Laerd Statistics, 2018).

In *Table 5. Ranks* and *Table 6. Test Statistics*, the results of the Friedman Test indicated that there was not a statistically significant difference in the intervention groups self-efficacy levels across time 1 (SE_1) which is the pre-intervention, time 2 (SE_2) which is the post-intervention, and time 3 (SE_3) which is the post 3 month follow up. This is indicated by a non-significant p-value of 0,247. Comparing the *Mean Ranks* across time 1, time 2 and time 3 shows that there was a practical significant increase in the intervention groups self-efficacy levels over time. However, due to the relatively small sample size this increase in Self Efficacy over time was not statistically significant.

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Figure 9. Intervention Group Self-efficacy over Time 1, 2 and 3, displays a graphical view of the immediate change/increase in the intervention groups self-efficacy between time 1 and time 2 *(time 1 mean* = 3,4333; *time 2 mean* = 3,6000*).* From time 2 and 3 the level of self-efficacy gradually increases/stabilizes *(time 2 mean* = 3,6000*; time 3 mean* = 3,6667).

Table 5. Ranks

Group		Mean Rank
1 INTERVENTION	SE_T1 FACTOR SCORE SE	1,50
	SE_T2 FACTOR SCORE SE	2,33
	SE_T3 FACTOR SCORE SE	2,17

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Table 6. Test Statistics

1 INTERVENTION	N	6
	Chi-Square	2,800
	Df	2
	Asymp. Sig.	**0,247**

Table 7. Intervention Group Self-efficacy over Time 1, 2 and 3

Group		Mean	Std. Deviation	N
1 INTERVENTION	SE_T1 FACTOR SCORE SE	**3,4333**	0,39328	6
	SE_T2 FACTOR SCORE SE	**3,6000**	0,34641	6
	SE_T3 FACTOR SCORE SE	**3,6667**	0,29439	6

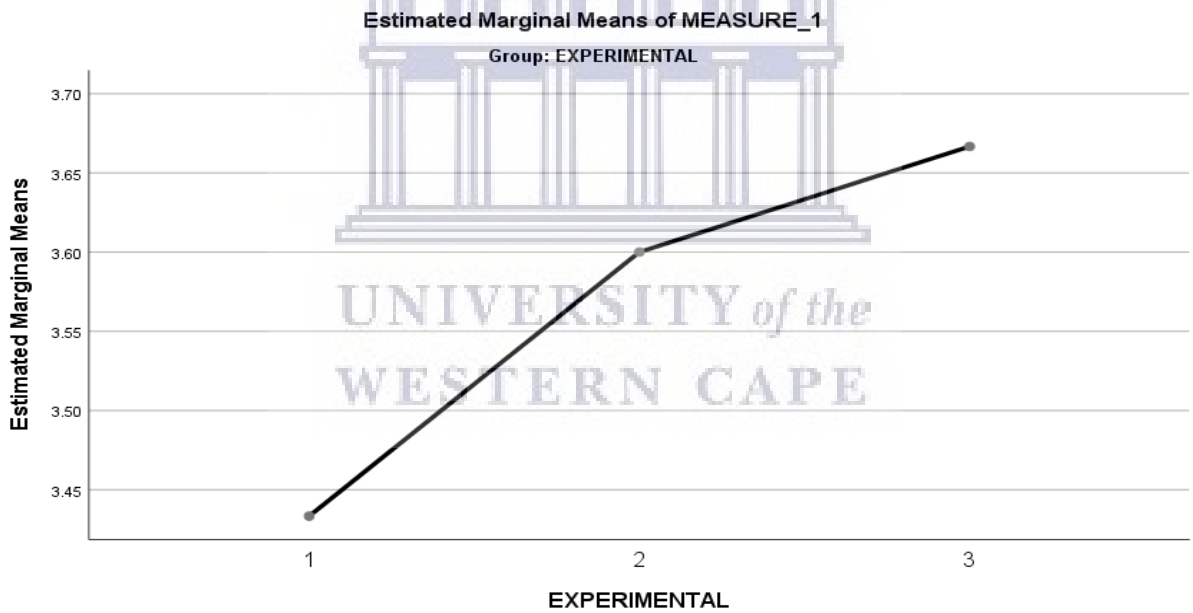

Figure 9. Intervention Group Self-efficacy over Time 1, 2 and 3

4.2.3 WILCOXON SIGNED RANK TEST

The Wilcoxon Signed Rank Test is a statistical evaluation of the mean of two dependent groups. This non-parametric test works with metric data (interval or ratio) that is not multivariate normal, or with ranked/ordinal data (Statistics Solutions, 2019).

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In this study, the Wilcoxon Signed Rank test was utilised to measure whether there was statistical significant differences within each group between time 1 and time 2 as well as between time 1 and time 3.

Results in *Table 8. and Table 9.* indicates that there were statistically significant differences between the mean ranks for the intervention group between time 1 and time 2, but not between time 1 and time 3. These results suggest that the intervention had an immediate effect on generalised self-efficacy but not a long-term effect for the intervention group.

Moreover, *Table 8. and Table 9.* indicate that there was no statistically significant difference between the mean ranks for the control group between time 1 and time 3. This suggests that there was no long-term effect visible for the control group. In addition to this, Figure 8 graphically displays the aforementioned over time 1, 2 and 3.

Table 8. Intervention and Control Descriptive Statistics

Group		N	Mean	Std. Deviation	Minimum	Maximum
1 INTERVENTION	SE_T1 FACTOR SCORE SE	7	**3,4429**	0,35989	2,90	4,00
	SE_T2 FACTOR SCORE SE	7	**3,6000**	0,31623	3,10	4,00
	SE_T3 FACTOR SCORE SE	7	**3,6667**	0,29439	3,30	3,90
2 CONTROL	SE_T1 FACTOR SCORE SE	10	**3,4100**	0,44083	2,70	3,90
	SE_T2 FACTOR SCORE SE	0				
	SE_T3 FACTOR SCORE SE	10	**3,4300**	0,38601	2,90	3,90

Table 9. Intervention and Control Test Statistics

Group		SE_T2 FACTOR SCORE SE - SE_T1 FACTOR SCORE SE	SE_T3 FACTOR SCORE SE - SE_T1 FACTOR SCORE SE
1 INTERVENTION	Z	-2.041[b]	-1.261[b]
	Asymp. Sig. (2-tailed)	**0,041**	0,207
2 CONTROL	Z		-.171[b]
	Asymp. Sig. (2-tailed)		**0,865**

b. Based on negative ranks.

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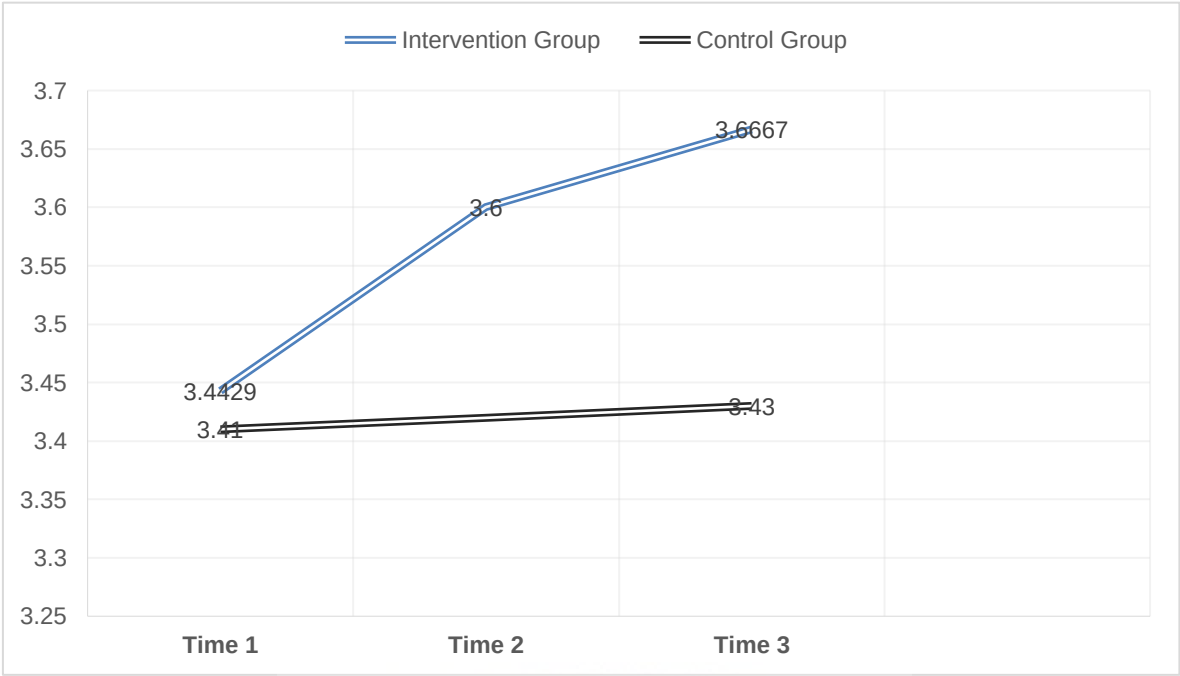

Figure 10. Intervention and Control Mean over Time 1, 2, and 3

The results largely supported the main research hypothesis that an assessment centre intervention is successful in bringing about a short- and long-term effect. Although the results were not statistically significant, the diverging lines in Figure 10 largely indicate that the intervention had a pronounced impact on the intervention group when compared to the control group. The results will be discussed in more detail in the next chapter.

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4.3 CONCLUSION

In this chapter, the study's results were outlined using non-parametric statistical analyses to describe the hypotheses outcomes. These statistical analyses identified the within-between research design between generalised graduate self-efficacy and the development centre intervention over 3 time periods between the control and intervention group.

CHAPTER FIVE: DISCUSSION

5.1 INTRODUCTION

The purpose of this study was to investigate development centres as a method to improve the self-efficacy levels of university graduates. The literature review presented in Chapter 2 argued for strong links between the elements of development centres and the mechanisms underlying self-efficacy. It was further argued that self-efficacy is a key component in promoting the employability and work performance of graduates. Chapter 3 discussed the research methodology and design that was utilised to empirically investigate the research objectives. Chapter 4 focused on discussing the results that emerged from the analyses of the data. This current chapter will discuss and contextualise the findings of the study. Moreover, this chapter will investigate the extent to which the objectives of this study has been achieved. The results found in the current study will be compared to the existing trends in literature. To conclude the chapter, the limitations of the study and recommendations for future research will be discussed.

5.2 BACKGROUND

Bridging the gap between tertiary studies and the workplace is critical for the business sector as well as the Higher Education Institutions. Universities aim to produce graduates that can make a material impact in the applied context, while organisations aim to attract the best talent coming out of universities. To this end, the gap between theory and practice remains an inconvenience for organisations and institutions of higher learning. The aim of the current study was to investigate if development centres can improve the self-efficacy of graduates over the short and long-term. The central idea behind the research is that increased levels of self-efficacy will equip students to deal with the novel challenges that are presented by one's first work assignment.

This study made use of a quasi-experimental research design that aimed to investigate if development centres can be fully used to improve the self-efficacy of university graduates at a selected university in the Western Cape, South Africa. The primary research question was centered on the idea that most graduates struggle to bridge the gap between the theoretical and practical settings. One of the factors acting as a catalyst for developing employable graduates is self-efficacy, which is the study's main

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focus. Generalised self-efficacy, or confidence in one's own ability, is when an individual has an accurate understanding of their own identity, personal capabilities, and self-belief to achieve a specific goal, task or overcome an obstacle (Bailey, Oliver, & Townsend, 2007; Lunenburg, 2011). The main aim of this study was to determine whether a development centre intervention can improve graduates' generalised self-efficacy in the short-term and long-term.

5.3 DISCUSSION OF THE FINDINGS

The self-efficacy questionnaire was presented to the intervention group before and after the development centre intervention, and thereafter tested three months later. The goal of using this design was to test the immediate and long-term impact of the development centre on generalised self-efficacy. The results indicated that the development centre had an impact on the self-efficacy levels of the intervention group. Moreover, results of the statistical analysis suggest a strong continuous improvement in the generalised self-efficacy of the intervention group over a three-month period. On the other hand, the self-efficacy levels of the control group had not increased nor decreased throughout the study and stayed fairly stable over the three-month period. Although the results were not statistically significant, the research shows that the intervention had a definite impact on the intervention group, relative to the control group. This provides support that development centres have a meaningful impact on graduates' generalised self-efficacy levels over the short and long-term. The results are discussed in more detail in the section below.

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5.3.1 HYPOTHESES 1

Hypotheses 1 tested whether the development centre intervention has a short-term effect on generalised self-efficacy levels of graduate students. The results supported this hypothesis, indicating that development centres as an intervention has an immediate effect on graduate self-efficacy. This comparison was statistically significant, despite the relatively small sample size. The intervention group displayed an immediate positive change in self-efficacy after participating in the development centre. The results seem to suggest that implementing development centres interventions into tertiary higher education institutions and its curriculum can increase perceived generalised self-efficacy in the short term. This study proved that it can benefit graduates by increasing their level of self-insight and self-efficacy levels. Other

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studies have found development centres to impact participants' self-awareness through performance feedback, outlining essential behaviours critical to their success, and improving graduate academic performance and employability (Sukalova & Hraskova, 2006; van Wyk & du Toit, 2018).

While assessment interventions pose many benefits, assessment feedback plays an integral part in a student's learning process. Hill and West (2020) conducted a study that focused on feed-forward assessments. The assessments consisted of students handing in an essay which was discussed and reviewed face-to-face with the course lecturer. After the initial feedback, the student had to complete a self-reflection of the assessment process and submit a final essay. The study found that the process positively impacted the students' learning experience on a cognitive and emotional level. The students' learning behaviour was also positively impacted, which supported their academic achievement and satisfaction with feedback.

In addition, a study conducted by Stevens, Hyde, Knight, Shires, and Alexander (2017) revealed that competency-based training and assessment techniques prepare clinical psychology graduates for the demands of professional practice and public responsibility. This study found that the assessment approaches equipped the graduates in experiencing real-world training simulations. It is evident that development assessment interventions holistically benefit students by improving their technical and interpersonal skills, creating self-awareness, identifying areas of strength and development through feedback and awareness, and preparing them for the world of work through live simulations.

Moreover, universities could also utilise development centres to identify graduate development areas. This data could then be utilized to create programmes to enhance these common development areas, such as communication skills, presentation skills, or increasing graduate personal mastery and confidence. However, it is imperative that tertiary institutions evaluate and utilise the most effective assessment interventions and tools for graduates. The primary overarching objective should be to develop competencies that leads to the employability and success in the applied setting. One study that evaluated assessment centre effectiveness is a study conducted by Chan, Purcell and Power (2016). The study evaluated the effectiveness

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of assessment tools in identifying clinical communication challenges of culturally and linguistically diverse students. The results of this study found that the establishment of effective assessment and intervention tools and programmes should aim at an integrated design and contain specific outcome measures to increase educational impact. This remains true for all development assessment tools and interventions. Universities should thus evaluate the development gaps in their graduate pool and aim to utilise the most effective and appropriate interventions to close those gaps, while also keeping abreast of the graduate skills and competencies that are relevant to organisations today.

5.3.2 HYPOTHESES 2

Hypotheses 2 tested whether the development centre intervention has a long-term effect on generalised self-efficacy levels of graduate students. The statistical test for the long-term effect was not statistically significant, but practically there was a consistent increase in self-efficacy from time 1 (pre-test) to time 3 (post 3-month test) for the intervention group. Thus, across all three measurement points there was an increase in generalised self-efficacy for the intervention group, but not for the control group. This indicates that the development centre had a strong impact on the short-term and long-term self-efficacy of graduate students.

The results from the study suggest that development centres can play a pivotal role in individual growth and performance of graduates, especially when it comes to self-efficacy. These centres help identify individual strengths and areas of development, determines essential behaviours for current success and future potential, and provide participants with feedback on their performance (Sukalova & Hraskova, 2006; van Wyk & du Toit, 2018).

While development centres have always been used very effectively in the world of work, Willis (2007, p.32) and Lorna (2014) states that these assessments should be assimilated into lectures and classrooms by providing distinctive links to personal and professional outcomes. One way of achieving this goal would be for universities to start incorporating elements of assessment centres into their teaching pedagogy and curriculum. Moolman (2017) states that it is vital that tertiary institutions to constantly build key job requirements into development centre designs to make sure graduates

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gets exposure to on-the-job tasks and activities. When tertiary institutions align their curriculum to the workplace, graduates will integrate into the workforce seamlessly and make an immediate impact in the organisation and wider economy. Managing director of ManpowerGroup South Africa, Lyndy van den Barselaar, posits that investing in the advancement and upkeep of career service centres should be a top priority in South Africa as these centres assist in closing the skill gaps and assists organisations to select the best talent from tertiary training institutions (The Skills Portal, 2018). While investing in development centres may be costly, tertiary institutions should find alternative methods to integrate development centre aspects into their curriculum. Practical examples include providing practical classes, focus groups, online chat groups, career counselling, assessment and development feedback that aims to enhance graduate employability and self-efficacy.

Universities such as the University of the Free State have invested in graduate development by initiating mandatory courses that focus on academic skills to produce successful students and graduate attributes that produce successful future employees (Petersen, 2018). These graduates experience development interventions such as developing their interviewing skills and resume writing. Other development experiences include work-readiness courses, attending career expo's, career services and webinars, gaining insight into what soft and hard skills organisations seek in graduates, and awareness around how social media impacts employability. Based on these initiatives and other investments into graduate development, the University of the Free State conducted a graduate exit survey that found that 74% of the 2017 graduate alumni who had indicated their desire to be employed after graduation were already working or accepted an employment offer. This tells us - that investing in graduate development that is aligned to the demands of the world of work can lead to universities producing graduates that can confidently prepare and apply themselves to becoming employable and successfully relevant to organisations.

Although various research studies have looked into graduate employability and development centres, limited research has focused on developing graduate self-efficacy. Employability is when graduates obtain and maintain employment with the appropriate skills and qualities, while continuously developing personally and professionally (Bridgstock, 2009; Hillage & Pollard, 1998). On the other hand, self-

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efficacy is a broad competency that may help graduates to develop the skills that is needed to stay employable. Recent literature suggests that efficacy is not a trait, but a general capability that evolves over time and experience (Mazaheri & Yazdani, 2016). This tells us that self-efficacy needs to be developed and maintained in order to have a positive impact in one's ability to accomplish tasks and overcome challenges. Moreover, multiple research studies have found self-efficacy as an important graduate attribute across numerous fields of study (Gharetepeh et al., 2015; Harvey, 2000; Lowden, Hall, Elliot & Jon, 2011; Morrison, 2014). When graduates have a strong sense of self-efficacy, they are able to approach difficult tasks, set stimulating goals and experience lowered levels of stress, depression and anxiety (Bandura, 1994). Thus, while the right graduate attributes and skills are important to academic and work success, the level of the graduates' self-efficacy in turn determines this success.

Research concurs by stating that an individual's environment is to an extent affected by their judgements of their own abilities (Aghdami Baher, Najarpoor Ostadi & Livarjani, 2009). However, despite both tertiary institutions and organisations placing great value on graduate self-efficacy, or at least it's proposed benefits, there has been a lack of effort to develop this attribute. Development centres is one way to have a positive impact on self-efficacy, which assists in gaining insight into the relative strengths and weaknesses of graduates who may be applying for jobs. While development centres focus on improving certain competencies of individuals for specific positions, universities should utilise these centres to develop graduate attributes which in turn develops graduate confidence to overcome future workplace challenges. Developing confident graduates may prove the single most important determinant of graduate success in the workplace. Moreover, it also influences the degree of their effort and perseverance when learning challenging tasks (Lunenburg, 2011). As this study has suggested, development centres positively influence graduates' self-efficacy over the short and medium term. This trend was not found with regards to the control group. This research informs us that development centres have certain additional benefits other than gaining diagnostic information about graduates that may be beneficial for graduates as well as organisations.

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5.3 LIMITATIONS OF THE STUDY

The biggest limitation of the study is the relatively small size of the control and intervention groups. With a larger sample size this study would have yield more concrete and reliable results. Although the statistical analysis suggested that the development centre had an influence on the self-efficacy perceptions of the intervention group, these inferences should be interpreted with caution due to the relatively small sample size. Moreover, more data needs to be collected in future to confirm the pattern of results. Another potential limitation of the study may be the lack of control variables. For example, it cannot be ruled out that the two groups were similar in terms of achievement motivation. It is well known that achievement motivation can have an impact on test performance which in turn will have an impact on general self-efficacy. Achievement motivation is an internal driving force that is said to impact how an individual performs and achieves a task or expresses an accomplishment (Bao & Zhou, 2017). However, Shokhmgar, Mohammadpour and Sanjari (2018) states that self-efficacy is in fact a determining element for achievement motivation. Based on various research studies, achievement motivation and self-efficacy seem to correlate when it comes to academic achievement and work performance (Bao & Zhou, 2017; Benawa, 2018; Saadat, Kord & Jalali, 2019; Saeid & Eslaminejad, 2017; Shokhmgar, Mohammadpour & Sanjari, 2018). In addition to this, students that volunteered to participate in the study could be seen as more motivated versus students that chose not to participate. Despite the study methodology being voluntary, students' motivation to participate in the intervention could potentially skew the study's results. Although researchers such as Zimmerman (2000) believe that self-efficacy influences student motivation, tenacity, level of effort, and emotional reactions.

Another limitation was the raters' experience to evaluate the participants. Although the raters had gone through an extensive frame of reference training with an experienced instructor, for most raters this was their first time scoring competency-based simulations. Moreover, more experienced raters would have the knowledge and training on how their role, behaviour and attitude affects candidate performance and assessor ratings (Wirz, Melchers, Lievens, De Corte, & Kleinmann, 2013). Although the actual results on the competencies did not have an impact on the level of self-efficacy, more experienced raters may have a calming effect on participants that may enhance feelings of self-efficacy after the development centre intervention. Research

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suggests that individuals have defined ideas, biases and capabilities that affect the quality of judgments made when evaluating the aptitude of candidates (Gigerenzer & Gaissmaier, 2011; Hoyt, 2000; Landy & Farr, 1980; Saal et al., 1980; Saal et al., 1974; Williams, Klamen, & McGaghie, 2003).

Moreover, the study only included data from a single university and a single class of graduate students in the same discipline. Although one would expect the results from the current study to extend to other settings and disciplines, this is an assumption that should best be tested. Furthermore, although the study's sample included a targeted group of students who voluntary participated, the sample included a mix of students with work experience and those without work experience. Students with work experience could have a bias effect on the study results as their efficacy may be higher in having experienced recruitment processes (such as interviews) or developmental interventions (such as focus groups and assessments). Ideally, with a larger population group and more participants volunteering to participate, students with work experience should be included in a separate intervention and possibly compared to those with minimal or no work experience.

Finally, the results on self-efficacy was collected by means of self-report instruments. Self-report measures typically suffer from impression management and faking behaviour – it would be more ideal to consider alternative data collection methods, including observations and online assessments that have validation tests for authentication reasons.

5.4 RECOMMENDATIONS & CONSIDERATIONS FOR FUTURE RESEARCH

Based on the findings and discussion, it is evident that development centres have a meaningful and positive impact on increasing graduate self-efficacy. Recommendations to implement development centres at universities should become an essential part of a graduates' journey. It is important to embed some elements of development centres in the classroom experience and assessments to build self-efficacy from the first-year level. Problem based learning has been extensively used in universities to promote self-development, mastery and self-efficacy (Demirören, Turan & Öztuna, 2016; Masitoh & Fitriyani, 2018). Problem based learning is a method of instruction where students learn through a pedagogical process with the focus on

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problem-solving (Smith & Hung, 2017). This instructional learning approach enhances the students' motivation by obtaining knowledge and assimilating it by utilising practical problem solving (Wijnia, Loyens, & Derous, 2011). It is clear that this method of learning contains various design elements that overlap with the development centre approach.

The objective of this study was to ascertain whether development centres develop confident graduate students over the short and long term. However, this study has not thoroughly investigated the mechanisms of how graduate confidence levels increases. Here, the opportunity for further research can be to unpack the means and mechanisms of developed self-efficacy through development centre initiatives.

The population of this study's intervention consisted of graduates with varying work experience. One could presume that a graduates' level of work experience has an impact on their confidence levels due to their exposure to certain work-specific tasks. In essence, higher education institutions would thus need to consider the design and implementation of development centres to graduates of varying calibre, such as of varying work experience. According to Thouin, Hefley and Raghunathan (2018), experienced versus inexperienced students differ in various aspects when it comes to university programs. The study discovered that inexperienced students desired longer programs and a curriculum that is more practical/technical, whereas experienced students desired shorter programs with a curriculum focusing more on people skills, such as leadership, strategy and organisational behaviour. Key considerations need to be taken when developing efficient development centre programs that are tailored to diverse graduate groups, keeping in mind resource efficiency (such as time, budget, and staff required).

With regards to development feedback, once graduates had gone through the intervention, reports were generated and distributed as a source of developmental feedback with the option of face-to-face feedback. Although the reports were resourceful, not many students opted for further insight into their feedback. It is thus recommended that researchers should review avenues of coaching, mentoring, and other creative feedback approaches after participants have gone through the development centre intervention. This could assist students in understanding their

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blind spots, areas of strength and improvement, and how to tackle new and unfamiliar tasks.

Moreover, consideration of different assessment strategies and methods could be reviewed for future research. This study focused on in-basket assessments and competency-based interviews that had specific competencies related to Industrial Organisational Psychology students. Alternative assessments that are grounded in graduate attributes relevant to the working world should be considered, for example, leaderless groups, case studies, focus groups, and role plays.

In addition to the above, the impact of development centre interventions in graduate careers and work experience should be considered. Graduates who undergo extensive engagement with development centre interventions could be studied. The questions of whether the engagement has resulted in an easier transition from university setting to the working world, whether it positively assisted in career progression, made them more employable, and helped them to develop the essential attributes organisations seek are all aspects that could be investigated.

Leadership attributes are considered one of the top essential attributes in the working environment. A decade long study conducted by Jacobs, Griswold, Swigart, Loviscky, and Heinen (2018) states that in assessment centres, graduates have the opportunity to practise their leadership abilities and obtain structured developmental feedback on the effectiveness of their actions by knowledgeable individuals. Future research can also attest to what degree of skills learnt through development centre initiatives would develop better leaders over time.

Another fruitful avenue of future research would be to investigate if other forms of development, including psychometric assessments, team intervention, and process consulting have the same impact on self-efficacy. If the improvement in levels of self-efficacy is similar to what was found in the current study, development centres may not be as important to improve self-efficacy as what may have been believed.

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5.5 CONCLUSION

The objective of this research study was to investigate whether development centres can be used to gain diagnostic information on graduates and improve their general levels of self-efficacy. This study revealed that implementing development centres within universities leads to a positive increase in the generalised self-efficacy levels of graduates. In addition, the findings revealed that development centres have an immediate impact on generalised levels of self-efficacy, which is maintained over the long-term. Graduate development is essential in building confident individuals to take on various new challenges that the world of work presents. Confident graduates are ultimately more courageous in taking risks and making better decisions, are able to tackle challenges better, set stimulating goals and commit to them, experience lower levels of stress, anxiety and depression, and puts more effort and perseverance into learning challenging tasks. It is clear from the research that developing graduates with a high level of self-efficacy is critical, as the graduates we develop today are the graduates who impact our future.

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Appendix A.1: Informed Consent Form for Intervention Group

University of the Western Cape
Economic & Management Sciences Faculty
Industrial Psychology Department
Robert Sobukwe Road
Bellville 7535
Tel: 021 959 3187/2585

GRADUATE DEVELOPMENT PROGRAMME

Dear Participant,

Congratulations, you have been successful in your application for the Graduate Development Programme!

This email and form is to brief you with some detail of the programme. As per our briefing presentation a few weeks ago you will be subject to experience the following events, namely a presentation, a development centre assessment process, and a self-insight feedback session.

You will also receive a reminder email 2 days prior to the event, just in case it slips your mind. We will add the venue details and a map to the email to make sure you get there at ease!

If at any time you feel that the need to withdraw from the programme please make contact with the below individuals at least 3 days prior to the event.

Don't forget that:

1. Your participation in the programme is completely **voluntary**.
2. Your information will remain **strictly confidential**.
3. Your information will **not be shared** with anyone.
4. Your participation in this programme does not in any manner impact your current tertiary studies and relationships at your institution.

If you have any questions about this programme, its procedures or any concerns, you may contact the following individuals on the following contact details:

Coordinator: **Melissa White**
Personal Email: **3324772@myuwc.ac.za**
Event Email: **graddevelopmentprogramme@gmail.com**
Contact Number: **072 857 6146**

Lecturer: **Dr. Jurgen Becker**
Staff Email: **JBecker@uwc.ac.za**
Office Room: **2.29.1 (EMS Building)**
Contact Number: **021 959 3180**

We look forward to seeing you then!

#MyCareerMyDevelopment
#GraduatesOnTheGrow
#YouMatter

Kindest Regards,

Melissa White

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Appendix A.2: Informed Consent Form for Control Group

University of the Western Cape
Economic & Management Sciences Faculty
Industrial Psychology Department
Robert Sobukwe Road
Bellville 7535
Tel: 021 959 3187/2585

GRADUATE DEVELOPMENT PROGRAMME

Dear Participant,

Congratulations, you have been successful in your application for the Graduate Development Programme!

This email and form is to brief you with some detail of the programme. As per our briefing presentation a few weeks ago you will be subject to experience the following events, a questionnaire process and a self-insight feedback session.

You will also receive a reminder email 2 days prior to the event, just in case it slips your mind. We will add the venue details and a map to the email to make sure you get there at ease!

If at any time you feel that the need to withdraw from the programme please make contact with the below individuals at least 3 days prior to the event.

Don't forget that:

5. Your participation in the programme is completely **voluntary**.
6. Your information will remain **strictly confidential**.
7. Your information will **not be shared** with anyone.
8. Your participation in this programme does not in any manner impact your current tertiary studies and relationships at your institution.

If you have any questions about this programme, its procedures or any concerns, you may contact the following individuals on the following contact details:

Coordinator: **Melissa White**
Personal Email: **3324772@myuwc.ac.za**
Event Email: **graddevelopmentprogramme@gmail.com**
Contact Number: **072 857 6146**

Lecturer: **Dr. Jurgen Becker**
Staff Email: **JBecker@uwc.ac.za**
Office Room: **2.29.1 (EMS Building)**
Contact Number: **021 959 3180**

We look forward to seeing you then!

#MyCareerMyDevelopment
#GraduatesOnTheGrow
#YouMatter

Kindest Regards,

Melissa White

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Appendix B: Research Participation Form

RESEARCH PARTICIPATION FORM

Please note that:

1. Your participation in the programme is completely **voluntary**.
2. Your information will remain **strictly confidential**.
3. Your information will **not be shared** with anyone.
4. Your participation in this programme does not in any manner impact your current tertiary studies and relationships at your institution.

I hereby agree that I have read through and understood the information that has been provided to me. I agree that I have been afforded the opportunity to contact coordinators of this programme. My signature below confirms that I have agreed to my participation in this study.

_____

(Name & Surname of Respondent)
Optional

_____

(Respondent signature)

Should you require any further information or have any concerns, please feel free to contact the below individuals of the programme.

Coordinator: **Melissa White**
Personal Email: **3324772@myuwc.ac.za**
Event Email: **graddevelopmentprogramme@gmail.com**
Contact Number: **072 857 6146**

Lecturer: **Dr. Jurgen Becker**
Staff Email: **JBecker@uwc.ac.za**
Office Room: **2.29.1 (EMS Building)**
Contact Number: **021 959 3180**

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Appendix C: Demographic Questionnaire

Please note that this information is strictly for statistical research purposes only.

1. **Age :** _____

2. **Gender :** ☐ Male ☐ Female

3. **Nationality :** _____

4. **Race :**
   ☐ White
   ☐ Black/African
   ☐ Asian
   ☐ Indian
   ☐ Coloured
   ☐ Other : _____

5. **Marital status:**
   ☐ Single
   ☐ Married
   ☐ Divorced
   ☐ Co-habitation
   ☐ Widow(er)

6. **Principle home Language :**
   ☐ Afrikaans
   ☐ English
   ☐ Tswana
   ☐ Pedi
   ☐ Venda
   ☐ Swati
   ☐ Southern-Sotho
   ☐ Tsonga
   ☐ Ndebele
   ☐ Zulu
   ☐ Xhosa
   ☐ Other : _____

7. **Work experience :**
   ☐ None
   ☐ Less than 6 months
   ☐ More than 6 months, less than a year
   ☐ 1 year +

8. **Current employment status :**
   ☐ Unemployed, but actively looking for work
   ☐ Unemployed and not looking for work
   ☐ Employed full-time
   ☐ Employed part-time

9. **I believe that I am… :**
   ☐ Already prepared for the working world/work environment
   ☐ Ready for the working world/work environment, but need some development
   ☐ Not ready for the working world/work environment
   ☐ Not certain on whether I am ready for the working world/work environment or not
   ☐ Don't really care

10. **Universities should introduce development centres for graduates:**
    ☐ Yes, this could greatly assist graduates
    ☐ No, I don't think it is relevant

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Appendix D: Generalized Self-Efficacy Questionnaire

Generalized Self-Efficacy Questionnaire

The following 10 statements are about your general belief in your ability to respond to and manage/control environmental demands and challenges.

Please read each statement carefully and use the scale to indicate the degree to which the answers accurately apply to you. Circle the number in the chosen block and remember to only circle one answer per statement.

The scale you will answer on is as follows:
1 = Not at all true
2 = Hardly true
3 = Moderately true
4 = Exactly true

		Not at all true	Hardly true	Moderately true	Exactly true
1	I can always manage to solve difficult problems if I try hard enough.	1	2	3	4
2	If someone opposes me, I can find the means and ways to get what I want.	1	2	3	4
3	It is easy for me to stick to my aims and accomplish my goals.	1	2	3	4
4	I am confident that I could deal efficiently with unexpected events.	1	2	3	4
5	Thanks to my resourcefulness, I know how to handle unforeseen situations.	1	2	3	4
6	I can solve most problems if I invest the necessary effort.	1	2	3	4
7	I can remain calm when facing difficulties because I can rely on my coping abilities.	1	2	3	4
8	When I am confronted with a problem, I can usually find several solutions.	1	2	3	4
9	If I am in trouble, I can usually think of a solution.	1	2	3	4
10	I can usually handle whatever comes my way.	1	2	3	4

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Appendix E: Lecturer Agreement Form

University of the Western Cape
Economic & Management Sciences Faculty
Industrial Psychology Department
Robert Sobukwe Road
Bellville 7535
Tel: 021 959 3187/2585

<u>Thesis title</u>: "*An intervention study to investigate development centres as a method to improve the self-efficacy of university graduates*"

Dear Lecturer,

I hereby cordially invite you to participate in an intervention study focusing on the graduate self-efficacy. I am Melissa White, and I am conducting this study in partial fulfilment of the requirements of the MCom degree in Industrial Psychology at the University of the Western Cape.

The study is interested in measuring the impact of graduate self-efficacy levels before and after introducing a development centre programme. The focus of this study is targeted at graduate students who are in progress of completing their honours degree in the Industrial Psychology department in the Western Cape.

To make this study happen I require no more than 20 minutes of your class time to present the opportunity to the target group to participate in this study. This presentation will outline the purpose of the intervention, the time, date and venue of the intervention and how graduates can get involved.

If you agree to participate in this study kindly sign below to confirm the following:

I _____(Name and surname)_____, lecturer of the honours _____(Module name)_____ class, hereby gives consent to both the researcher of this study and supervisor of the researcher to conduct the research presentation as explained to me above to my class on a mutually agreed date and time. Should I at any moment feel that I would like to reschedule or revoke the presentation from happening I am responsible of giving at least 48 hours' notice to both the researcher and supervisor.

If you have any questions about this study, its procedures or even the results in the final thesis, you may contact the following individuals on the following contact details:

Coordinator: **Melissa White**
Personal Email: **3324772@myuwc.ac.za**
Event Email: **graddevelopmentprogramme@gmail.com**
Contact Number: **072 857 6146**

Lecturer: **Dr. Jurgen Becker**
Staff Email: **JBecker@uwc.ac.za**
Office Room: **2.29.1 (EMS Building)**
Contact Number: **021 959 3180**

I would humbly appreciate your participation and assistance.
Thanking you in advance!

Kindest Regards,

Melissa White

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ASSESSMENT CENTRE OBSERVER GUIDE

INTERN INDUSTRIAL PSYCHOLOGY POSITION

UNIVERSITY OF THE WESTERN CAPE

INDUSTRIAL PSYCHOLOGY DEPARTMENT

2018

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1. INTRODUCTION

The purpose of this Assessment Centre Observer Guide is to provide a guideline to the observer who will be assessing candidates for the Intern Industrial Psychology (I-OP) position in the department of Industrial Psychology at the University of the Western Cape. This role will be assessed against a competency framework collated by various sources and developed by the researcher of this study, Melissa White. In addition to this, this manual outlines detailed information around how the assessment centre will operate, the various simulations and material required to assess the Intern I-OP role.

Questions or concerns should be raised with the following individuals should need be.

Melissa White

Researcher

3324772@myuwc.ac.za

Prof. Jurgen Becker

Supervisor

jbecker@uwc.ac.za

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2. OVERVIEW

The assessment centre process will occur on Saturday, 06th October 2018 @ 09h00am-15h00pm at UWC in the Industrial Psychology IPS Lab room.

As the observers you will be required to take three shortlisted participants through an in-basket activity and a competency-based interview for the Intern Industrial Organisational Psychologist role. These simulations will be further outlined throughout this document with regards to the simulation instructions and activity, along with the respective rating scales and sheets required by the observers.

Once all simulations have been conducted, as the observers you be required to go through a data-integration session where you will rate and finalise all scoring based on the outcomes of each participant. Thereafter, participant development reports will be written and emailed directly to the researcher and supervisor to send out to the respective participants. The deadline for this is 16th October 2018 @ 11h00am.

The competencies that the intern I-OP role aims to be assessed against are as follows:

- **Relevant knowledge and skills**

  Possessing the necessary knowledge and skills to meet the job demands.
- **Planning and organising**

  Organising information and determining courses of action for oneself and others, taking relevant factors into account.
- **Communication – Oral**

  Effective two-way communication with others, including verbal and gestural expression, and listening.
- **Communication – Written**

  Clear written expression of ideas or information.
- **Action orientation**

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Willingness to take action to accomplish tasks, maintaining a high level of motivation and energy.

- **Ability to learn**

  Ability to assimilate, understand and apply new information.

- **Attention to detail**

  Taking relevant and complex details into account.

- **Analytical thinking**

  Understanding a situation by breaking it apart into smaller pieces or tracking the implications of situations in a step by step way.

- **Adaptability**

  Maintaining effectiveness in varying environments and with different people, tasks and responsibilities.

- **Initiative**

  Originating action and taking the initiative without having to be prompted.

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3. INTERN I-OP JOB SPECIFICATION

INTERN INDUSTRIAL ORGANISATIONAL PSCYHOLOGIST (I-OP)

DESCRIPTION

POSITION	Intern Industrial Organizational Psychologist
INSTITUTION/COMPANY	University of the Western Cape
DEPARTMENT	Industrial Psychology Department
REPORTS TO	Head of Department & Senior Resident Psychologist
DURATION	12 months with intention to promote based on performance

PURPOSE

Industrial psychologists plan, develop and apply paradigms, theories, models, constructs and principles of psychology to issues related to the world of work in order to understand, modify and enhance individual, group and organisational behaviour well-being and effectiveness.

The purpose of this internship is to allow interns to convert previously acquired theoretical knowledge into activities related to professional practice, and to apply newly acquired practical knowledge and skills, under the supervision of a senior industrial psychologist.

Interns need to be able to demonstrate an applied post-master's degree competence and proficiency in the domain of industrial psychology. Such competencies are tangible and observable human behaviour-related diagnosis, design, intervention and assessment that are applied at the individual, group and organisational levels.

The content of the internship position has been designed in terms of the requirements set out by the Professional Board for Psychology of the Health Professionals Council of South Africa. The program includes activities incorporated in the following domains:

- Organisational Psychology (15%)
- Career Psychology/ Employee well-being (15%)
- Personnel Psychology (15%)
- Psychometric testing and assessment (20%)
- Electives (15%)
- Professional Ethics (10%)
- Leave (5%)

The intern will ensure compliance to any legal requirements around Employment Equity, Psychometric testing, job analysis and competency-based systems of assessments.

DUTIES & RESPONSIBILITIES

For the internship I-OP role the following duties and responsibilities are listed below.

1. Organisational Psychology (8 weeks and 15%)

Domain	Activities	weeks	%
Change Management	• Research change management approaches in order to deliver on a change management project • Analyse the impact of change on an organisational change intervention • Develop a Change Management strategy and plan • Participate in the implementation of the Change Management plan.	2	4%

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Organisational culture and climate	• Training on UWC culture assessment tools in order to analyse the results from the yearly culture survey. • Analyse and interpret survey results • Development of culture enhancement or corrective action and interventions based on the survey.	2	4%
Leadership Development	• Review UWC's leadership development framework. • Develop interventions to improve leadership effectiveness • Present leadership development intervention and evaluate effectiveness	2	4%
Organisation and Team Development	• Research different methodologies in team development. • Develop methodology and tools to assess organisational and team effectiveness. • Assess and report on organisational and team effectiveness in a work unit. • Develop interventions to improve the effectiveness of the identified work unit. • Conduct two team effectiveness interventions.	2	4%
Sub-Total		**8**	**16%**

2. Career Psychology and Employee Wellness (8 weeks and 15%)

Domain	**Activities**	**Weeks**	**%**
Career Counselling	• Review the current literature and best practice on counselling/vocational guidance. • Observation and facilitation of at least 3 one-on-one career counselling/vocational guidance sessions with employees using relevant psychometrics. • Preparation and facilitation of 1 group career counselling intervention to assist in career path planning and development in a particular job family • Compilation of 2 career counselling reports and personal development plans (face-to-face feedback in career counselling sessions).	3	6%
Employee Wellbeing	• Development of a wellbeing programme for employees going through a significant change process • Development of line managers as the first line of call for employees experiencing change negatively • Counselling of employees needing assistance in coping with change and referring employees for professional assistance where required • Observing counselling sessions done by Counselling /Clinical Psychologists as part of the UWC wellbeing referral programme and reporting on techniques and outcomes	2	6%
Occupational Stress Management	• Diagnosis of a group of individuals reporting the development of resilience as a key development area for them • Development and facilitation of a resilience building workshop and evaluation of workshop impact	2	4%
Workplace related pathology	• Exposure to workplace related pathology (i.e. stress and burnout, depression, psychological trauma etc.) • Diagnoses and appropriate referral procedures and treatment in the workplace of workplace related pathology. • Training on basic trauma and stress debriefing (the focus is on short term counselling and helping skills)	1	2%
Sub-Total		**8**	**18%**

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3. Personnel Psychology (8 weeks and 15%)

Domain	Activities	Weeks	%
Recruitment and Selection	• Review and report on UWC's recruitment process, policies and procedures, as well as employee value proposition. • Screen candidate CV's. • Conduct screening instruments. • Shortlist candidates. • Interview short listed candidates on competency-based interview guide (at least 5 interviews) • Make recommendations to line regarding short listed candidates.	2	4%
Organisation Design, Job design and analysis	• Review existing UWC organisational design approach and structures • Participate in the design of organisation structure and roles. o Attend training on UWC's role design and evaluation system o Analyse new organisation structure and role requirements and how the roles are expected to change. o Interpret role information to design new job profiles. o Validate job profiles and competency profiles with line managers. • Conduct capacity required for the roles over the next 3 years	1	2%
Organisational Talent and Performance Management	• Understand the UWC's business or Business Unit strategy. • Participate in the alignment of scorecards to the business strategy • Review and report on alignment between business performance and individual reviews • Participate in talent review for talent pools and development programmes	1	2%
Remuneration and Reward	• Reviews reward strategy and principles and market related comparisons • Study and report on benefits and its value to employees • Participate in organisational, team and individual incentive scheme allocation	1	2%
Industrial Relations	• Review UWC's IR policies in relation to the Labour Relations Act, Basic Condition of Employment, Employment Equity Act and Skills Development Act. • Attendance of an Employee Relations training workshops. • Observe a disciplinary hearing and CCMA case	1	2%
Training Program	• Design a training program Conduct a needs analysis, design and facilitate/present program and conduct program evaluation.	2	4%
Sub-Total		**8**	**16%**

4. Psychological Testing and Assessment (10 weeks and 20%)

Domain	Activities	Weeks	%
Psychological assessment	• Review and report on current assessment practice and policies relative to HPCSA guidelines including online testing and its impact on results • Conduct psychometric assessments (including administration, scoring and interpretation). The following psychometric assessments will be utilised: o SHL Occupational Personality Questionnaire SHL Verbal and Numeric Reasoning o SHL Clerical Test Battery o Psytech General Reasoning Battery o Hogans Development Survey	10	20%

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	○ Cognadev Cognitive Processing Profile ○ Meyers and Briggs for team development purposes ○ Career Path Appreciation ○ Insights ○ Schein's Career Anchors • Design an assessment intervention for a specific role and purpose • Competency-based assessment – utilise psychometrics in conjunction with behavioural observation • Questionnaire design and validation • Assessment centre observation and behavioural analysis against a competency framework for managers • Report on Validity and Reliability of instruments and processes used, ethical conduct, potential bias and alignment to the Employment Equity Act of SA • Write at least 20 selection assessment reports and provide feedback • Write at least 20 development assessment reports and provide feedback • Integration of assessment results and feedback to line managers and candidates • Report on the extent to which international and national best practice guidelines are applied at UWC		
Sub-Total		**10**	**20%**

5. Electives (8 weeks and 15%)

Domain	**Activities**	**Weeks**	**%**
Choose two electives in support of organisational drivers from the following list : • Consumer Psychology • Ergonomics • Research project • Psychology of employment relations • Coaching Psychology • Consulting Psychology • Counter - productive organisational behaviour • Organisational Ethics • Human Resources Information Systems	• Activities will be specified in support of electives chosen	9	17%
Sub-Total		**9**	**17%**

6. Professional Ethics (5 weeks and 10%)

Domain	**Activities**	**Weeks**	**%**
Training and Guidelines	• Attendance of ethics workshop for continuous educational units and study of HPCSA and Professional Board of Psychology guidelines as well as international best practice.	1	2%
Reports and Discussions	• Include ethical considerations in work completed as part of quarterly reports and discuss with supervising psychologist,	2	4%

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	the application of ethics and ethical dilemmas found in work activities throughout the internship programme		
HR Practices	• Review and report on UWC's HR practices in alignment to ethical guidelines	1	2%
Research	• Demonstrate how research completed was done in accordance with guidelines of professional practice	1	2%
Sub-Total		**5**	**10%**

7. Leave and Professional Development (3 weeks and 5%)

Domain	**Activities**	**Weeks**	**%**
Annual leave	Inclusive of 15 day annual leave and possible sick leave	**3**	**5%**
Professional Development	Supervisor meetings and report writing	**1 (overlap)**	
Sub total		**4**	**5%**

Total		**52**	**100%**

KNOWLEDGE, SKILLS & EXPERIENCE

EDUCATION	Honours Degree
SKILLS	• Good verbal and written communication skills • Computer literate (including but not limited to competence in Microsoft Office- Outlook, Word, Excel, PowerPoint and Excel) • Be consistent, flexible and able to work at a fast pace • Be able to work with individuals on all levels (i.e. students, clients, lecturers, senior leaders, colleagues)
EXPERIENCE	0-1 year work experience. Experience in HR advantageous.

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4. OBSERVER PROGRAMME

OBSERVER PROGRAMME

06th October 2018 - 09h00-15h00

Observer Name & Surname: _____

	OBSERVER 1	OBSERVER 2	OBSERVER 1 &/ 2
ACTIVITIES	PARTICIPANT 1: _____	PARTICIPANT 2: _____	PARTICIPANT 3: _____
Welcome, Orientation, & Briefing	09h00-09h30 *IPS LAB*	09h00-09h30 *IPS LAB*	09h00-09h30 *IPS LAB*
Tea Break	09h30-10h00 *Break Room*	09h30-10h00 *Break Room*	09h30-10h00 *Break Room*
In-basket Activity	10h00-11h00 *IPS LAB*	10h00-11h00 *IPS LAB*	10h00-11h00 *IPS LAB*
Lunch	11h00-11h30 *Break Room*	11h00-11h30 *Break Room*	11h00-11h30 *Break Room*
Competency-Based Interview	11h30-12h30 *Interview Room 1*	11h30-12h30 *Interview Room 2*	12h30-13h30 *Interview Room 3*
Debriefing & Closing	13h30-14h00 *IPS LAB*	14h30-15h00 *IPS LAB*	14h30-15h00 *IPS LAB*
Data Integration Session	14h00-15h00 *IPS LAB*	14h00-15h00 *IPS LAB*	14h00-15h00 *IPS LAB*

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5. ASSESSMENT CENTRE SIMULATIONS

5.1 IN-BASKET ACTIVITY

The below assessment covers the in-basket activity material required for the assessment centre procedure.

INBASKET ACTIVITY

PARTICIPANT INSTRUCTIONS

Introduction:

Your role is that of a Personnel Manager in a middle management position within the Espresso Company. The Espresso Company is a South African coffee company which is committed to supplying only the finest gourmet coffee, world-class coffee equipment and accessories to the catering, corporate, retail and wholesale sectors nationally.

Background:

Your name is **Don Tsuko**, a masters student in Industrial and Organisational Psychology at the University of the Western Cape. You applied for an internship at the Espresso Company last year and you made it through the selection process. You have been working at the company for six months now, while trying to combine work with your duties as a masters student. You have been on vacation for the past week. Tomorrow (02nd February 2014) you will start working again. Yesterday, you received an email from your internship supervisor, which stated that you are being given the opportunity to replace the Personnel Manager, **Kurt Collins**, for the following three weeks.

Your work at the company has been appreciated so much that the CEO of the company finds you more than suitable to stand in for Kurt for the next three weeks. He expects you to give your very best and to make decisions strategically and independently. He is willing to give you his full trust and confidence. You need to deal with all Kurt's responsibilities and will receive all the tasks in his in-basket.

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You will report directly to the Chief Executive Officer (CEO), **Bart Donson**, in Kurt Collins' absence. There are also four department managers who will report directly to the CEO. You will be in charge of general personal matters. Reporting to you are two assistants**, Janine Dwight** and **Lufuno Matsila.** Both are regarded as competent and motivated. Kurt Collins has been working with them for over seven years and is very fond of them. Your internship supervisor also appointed a secretary, **Elaine Fishent**, to assist you so that you can also discuss important matters with her. She knows the company well and knows how to find pertinent information when necessary. She looks for opportunities to take on more responsibility than what is required from her as a secretary.

Instructions:

You are in Kurt Collins' office and are sorting through his in-basket and deal with the mail that will come in.

1. You have **60 minutes** to take care of 4 items.
2. You have your first meeting with the CEO, Bart Donson, in order to introduce yourself and discuss urgent matters.
3. Everyone else is out of the office this morning so you cannot make any telephone calls.
4. You must work alone, and you only have access to the items in the in-basket, your computer and email.
5. It is important that you let subordinates know exactly **what you plan to do with each item in the in-basket.**
6. **You must also indicate your actions and decisions,** so that when they arrive back at the office they understand what is expected of them.
7. At the same time, you need to focus some attention on your **master's study obligations.**
8. You should also plan all telephone calls you intend to make regarding any of the items and define them clearly. In short, every action you take or plan should be in writing.

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9. Write your response to each item on the paper that is provided and clearly mark each item number.
10. You can answer the items in any order.
11. Remember that you have a diary planner on which you can see the dates when you will or will not be in office.
12. You will also have access to the organogram of the company.

In addition, you received you time schedule from your university (item 6). The schedule describes when you will be attending classes and when you need to lecture classes. You are also informed about class projects, exam dates, student meetings, etc. **It is your task to successfully combine your work and your academic life.**

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ITEM 1

To: Don Tsuko, Department Manager, Personnel
From: Bart Donson, CEO
Date: 2 February, 2014

Subject: Welcome to our company!

Dear Mr Tsuko

I heard the wonderful news that you will be joining our company as a department personnel manager for the next three weeks. I trust that you will find your feet and will settle into our 'way' of doing things very quickly. Mr. Collins informed me that you have been assigned to his position as Head of the Personnel and labour Relations Division.

Most of your correspondence will be with Mr. Collins, but I would like to share some important matters with you. Seeing as some of our core values include honesty and transparency I truly hope that whenever you correspond with anyone you will honour this. Please don't see this as criticism; I am merely trying to set the tone for the future working relationship.

I have a meeting with you this morning. Please prepare to inform me how you will integrate your academic responsibilities with your work obligations. Both need will be taken very seriously, and I need to see proof of this, as I know you have never handled this much responsibility before. How will your studies affect your work? This has an impact on many parties and you may have to come up with different ideas to accommodate the different parties' needs. I am keen to see how you plan to manage your time and how you would prepare others for when you are out of the office and how you plan to inform them of your capacity at work.

Hope you enjoy your position as a manager. Good luck!

Kind Regards,
Bart Donson
Chief Executive Officer
Espresso Company

Instructions/matters to consider:

1. It is important to show how you plan to juggle these two equally important responsibilities.
2. It is important to understand the effects that your decisions will have.
3. Others need to understand the extent of your availability to deal with work responsibilities.

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ITEM 2

To: Don Tsuko, Department Manager, Personnel
From: Kate Sloan, Department Manager, Administration
Date: 1 February, 2014

Subject: Urgent Matter, new administration trainee: Jane Kirk

Dear Mr Tsuko

Jane Kirk will be the new administration assistant in the front office. Last week you interviewed Jane Kirk and decided that she was suitable for the job. Congratulations on hiring our new assistant!

Jane did have some complaints about the selection procedure though. In her correspondence with me she said that she did well in her curriculum and that her guidance counsellor had directed her to our company. She really wants to work in our company but she demands changes be made in the treatment of job applicants by the administration office. The previous assistant, Mrs. Lezato Moruke, administered her.

As Jane entered the office Mrs. Moruke was on the telephone. Jane noticed she was calling one of her friends and she had to wait for over 15 minutes while Mrs. Moruke was talking about her weekend plans. When Mrs. Moruke finally paid attention to her she was very short and snippy with Jane. I spoke to Mrs. Moruke about the issue, but because she has been promoted to a new job she does not seem to care very much. Various people and therefore opinions are involved here and we are not sure who is speaking the truth. We cannot afford to lose Jane or have her start working on a bad note, but we do not want to keep Mrs. Moruke's promotion from her either.

Could you direct our apologies to Mrs Kirk and explain how we are going to handle this issue? She is of great importance to our company and I do not want to lose her before she even starts her new job as this would make our company look rather bad. This is a rather urgent matter. It needs to be settled ASAP and in the most effective way possible. I know you have several other things on your plate but luckily you have people to assist you with certain things that do not require as much authority. Please inform those involved of the next steps. We cannot have this happen again in future, it is an embarrassment. Please make sure this is dealt with in a suitable manner, with the necessary care and by following the right procedures. We need to see what we can do to create the best out of this situation.
Thank you.

Regards,
Mrs. Sloan
Instructions/matters to consider:

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1. Make sure you handle this situation with all the facts at hand.
2. Decide carefully on what to do and how it will impact the bigger picture.

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ITEM 3

To: Don Tsuko, Department Manager, Personnel
From: Janine Dwight, Assistant, Personnel and Labour Relations
Date: 30, January, 2014

Subject: Help

Dear Mr. Tsuko

I am so sorry to bother you, but I have to talk to someone about a problem I have. I do not know what to do anymore and the problem affects my performance on the job. As a result, my colleagues are mocking me and gossip flows through the company's grapevine. I feel really bade and I feel worse by the day. My only friend in the office suggested that I speak to you. I am in a great need of a promotion because I do not earn enough to cover my monthly costs. My child is now going to school and my husband is very sick. I am the only financial provider in the household and I do not earn enough money to make ends meet (transport, school fees, medical costs etc). I therefore ask you for a raise. Please help me. I feel that my working hours are causing a bad work/life balance and I am underpaid. I am not sure whether seeing a counsellor will help at this stage. But I do not have the money either way.

I also want to ask you to talk to Lufuno Matsila and Elaine Fishent. They are very rude and unkind to me every day, mocking my situation. I overheard them gossiping about my financial status and they say I cannot take care of myself properly and therefore belong in a mental hospital. This is not the way I want to be treated. Others are making my life more difficult here, but I know my crying also distracts them from their work.

Lufuno and Elaine deny their behaviour when others have confronted them based on what I tell them. They complain they are just as fed up of how draining I am in the work environment and that they will put in a formal complaint against me ASAP. They say I am lazy and have a sense of entitlement, but I am just trying to cope. Please deal with these two, I cannot handle the embarrassment any longer…but please do not merely talk to them, others have tried before but then they take their side. If you speak to Lufuno and Elaine you will hear a different story from them but I assure you they are wrong and just overly judgemental. Please address them accordingly, otherwise I will file for harassment/bulling in the workplace. I will go straight to the CCMA without warning.

This company is supposed to hold respect for others in high regard. I cannot take it anymore. If nothing changes soon, I might even consider suicide. I need you help and advice on how to proceed, it is getting worse by the day. This is very urgent to me and I am afraid of cracking at work. Who can I turn to, if not you? I am not sure if I can turn to someone else, although I understand

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that you alone cannot come up with all the solutions to my variety of problems and I know you are busy.

Please let me know ASAP of your decisions and how you could possibly help me. I am desperate for a workable solution. Please explain your proposed solutions to me and why they work. I cannot think straight anymore. I cannot feel this way again, I need a sustainable solution.

Hoping for a positive reply.

Regards,
Janine Dwight

Instructions/matters to consider:

1. Communicate your decision to Janine in detail and in a timely manner since this is a very sensitive situation and she is very desperate for understanding.

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ITEM 4

To: Don Tsuko, Department Manager, Personnel
From: Bart Frohlich, Head of I-O department
Date:

Subject: Courses for first semester

Good Morning,

Attached is the schedule with the courses for this semester. It is compulsory to attend all your classes. If you miss more than two of these classes you can be expelled from the course.

	Monday	Tuesday	Wednesday	Thursday	Friday
08h00-10h00	Data analysis			Applied Research	Advanced Assessment
10h00-12h00		HR Management			
13h00-15h00			Talent Management	Practical data analysis	
15h00-17h00	Diversity Dynamics				Leadership

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Furthermore, the following dates you need to be present and can't miss.

- Leadership workshop 20/02
- Obligated practical data analysis: every Thursday (full day)
- SIOPSA Talent Management Conference: 10/02 13h00 for 13h30

Kind Regards,

Brent Frohlich
Head of I-O Department

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Scheduling Calendar

February 2014						
Sunday	**Monday**	**Tuesday**	**Wednesday**	**Thursday**	**Friday**	**Saturday**
1 Email from internship supervisor	**2** 1st day at work	**3**	**4** Out of office meeting in CPT	**5**	**6**	**7**
8	**9**	**10** Representing Espresso in Arbitration court case	**11**	**12** Out of office: Wedding	**13** 20h00: Nephew's theatre concert	**14**
15	**16**	**17**	**18**	**19**	**20** Last day as personnel officer	**21**
22	**23**	**24**	**25**	**26**	**27**	**28**

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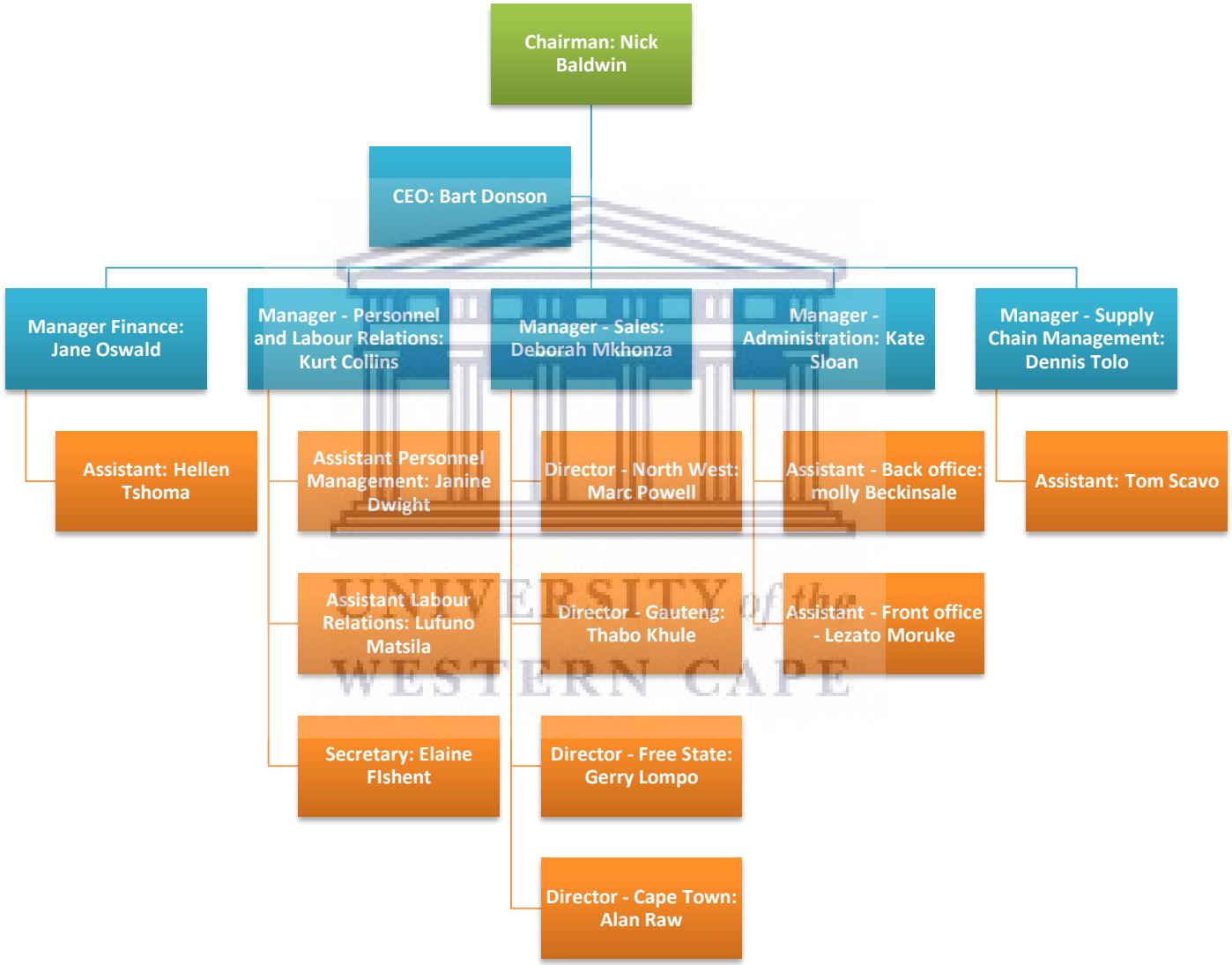
The Espresso Company – Organogram



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IN-BASKET ACTIVITY GUIDE

The below competencies and respective behavioural indicators should be utilised as a guide when rating participants on the below rating guide (5-point Likert scale).

Rating Guide (5-point Likert Scale):

DEFINITION	WELL BELOW REQUIREMENTS / NO EVIDANCE OF BI OR RESPONSE	BELOW REQUIREMENTS / INACCURATE BI OR RESPONSE	MEETS MOST REQUIREMENTS WITH DEVELOPMENT / COMPETENT BI OR RESPONSE	ABOVE REQUIREMENTS / HIGHLY COMPETENT BI OR RESPONSE	WELL ABOVE REQUIREMENTS / ANSWERS ALL BI'S AND DOES MUCH MORE THAN REQUIRED
RATING	1	2	3	4	5
DESCRIPTION	Does not meet requirements for the role. Significant development is required.	Does not meet most requirements for the role. Significant development is required.	Meets most requirements for the role. Some development is required.	Meets all and exceeds in some requirements for the role. Minimal development is required.	Exceeds requirements for the role.

Competency and Behavioural Indicator (BI) Guide Per Item:

RELEVANT KNOWLEDGE AND SKILLS

Definition: *Possessing the necessary knowledge and skills to meet the job demands.*

This competency rating will be based on an overall mark based on the participant responses and observer observations.

PLANNING & ORGANIZING

Definition: *Organizing information and determining courses of action for oneself and others, taking relevant factors into account.*

Behavioural Indicators:

- Set priorities
- Establish objectives and milestones
- Establish times and schedule activities (with relevant parties)
- Identify and allocate resources
- Use tools (e.g. Calendar, files, flip charts)

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COMMUNICATION- WRITTEN

Definition: *Clear written expression of ideas or information.*

This competency rating will be based on an overall mark based on the participant responses and observer observations.

ACTION ORIENTATION

Definition: *Willingness to take action to accomplish tasks, maintaining a high level of motivation and energy.*

Behavioural Indicators:

- Makes things happen rather than waiting for things to happen
- Moves into action timeously
- Puts a lot of energy into planning
- Puts a lot of energy into action
- High determination to get things done

ATTENTION TO DETAIL

Definition: *Taking relevant and complex details into account.*

Behavioural Indicators:

- Clarifies details of task
- Completes all details
- Check outputs for accuracy and completeness
- Follow established procedures
- Maintains checklist to cover details

ANALYTICAL THINKING

Definition: *Understanding a situation by breaking it apart into smaller pieces or tracking the implications of situations in a step by step way.*

Behavioural Indicators:

- Sets priorities for tasks in order of importance
- Breaks down a complex task into manageable parts in a systematic way
- Recognizes several likely causes of events, or several consequences of actions
- Anticipates obstacles and thinks ahead about next steps

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- Uses several analytical techniques to identify several solutions and weighs the value of each

ADAPTABILITY

Definition: *Maintaining effectiveness in varying environments and with different people, tasks and responsibilities.*

Behavioural Indicators:

- Sees situation objectively
- Flexibly applies rules or procedures
- Adapts tactics to situations or others' responses
- Adapts own strategies, goals or programmes to situation
- Makes organisational adaptations

INITIATIVE

Definition: *Originating action and taking the initiative without having to be prompted.*

Behavioural Indicators:

- Is proactive
- Addresses current opportunities/problems
- Works independently
- Extra effort
- Does more than is required

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Based on the above competencies and BI's an overall rating utilizing the 5-point rating scale will be utilized as a guide.

ITEM 1:

General overview

The CEO expresses his congratulations to you for joining the company on a temporary basis. He confirms your position and hopes that you will find your feet very quickly. He advises you about your correspondence but also addresses certain important matters with you. He discusses the corporate values and tries to set the tone for your future work dynamics. He informs you that he has a meeting with you and requests you to inform him how you plan to integrate you academic responsibilities with your work obligations.

	Competency	Summary of participant performance	Overall Rating
1	Planning and organizing		
2	Action orientation		
3	Attention to detail		
4	Analytical thinking		
5	Adaptability		
6	Initiative		

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ITEM 2:

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General overview

An urgent matter is brought to your attention regarding Jane Kirk, the newly hired administration assistant. You are informed that Jane complained about the selection procedure. As much as Jane desires to work for this company, she demands that changes be made in the treatment of job applicants by the administration office. Specifically, the previous assistant was the problem as she was on the phone for a long time with one of her friends while Jane was waiting to be assisted. When she finally paid attention to jane, she was rude. Even though Jane attempted to deal with the previous assistant herself, she did not seem to care as she was being promoted anyway. You have been asked to direct apologies to Jane and explain how the issue will be handled. Jane is seen as being a great asset to the company.

	Competency	Summary of participant performance	Overall Rating
1	Planning and organizing		
2	Action orientation		
3	Attention to detail		
4	Analytical thinking		
5	Adaptability		
6	Initiative		

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ITEM 3:

General overview

Janine Dwight, an assistant in Personnel and Labour Relations, has a problem and has decided to turn to you. This problem affects her job performance and, as a result (according to her), other employees in the office are mocking her and spreading rumors. She has one friend in the office, but she is feeling evermore despondent every day. She states that she is desperate for a promotion since she does not earn enough to cover her monthly costs. Her domestic situation is very demanding and expensive. She is asking you to please help her to get a raise. Finally, she asks you to address two employees whom she states are very rude and unkind to her all the time. She emphasizes her unhappiness and states that she might consider suicide. She hopes for a positive response.

	Competency	Summary of participant performance	Overall Rating
1	Planning and organizing		
2	Action orientation		
3	Attention to detail		
4	Analytical thinking		
5	Adaptability		
6	Initiative		

ITEM 4:

General overview

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From the head of the I-OP department you receive the schedule for the master courses of the first semester. It is compulsory to attend all your classes. If you miss more than two of these classes, you can be expelled from the course. You are also provided with specific dates on which you will present.

	Competency	Summary of participant performance	Overall Rating
1	Planning and organizing		
4	Analytical thinking		
6	Initiative		

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5.2 COMPETENCY-BASED INTERVIEW

Interviewers Name & Surname: _____

Candidate Name & Surname: _____

Interview Time: 1 hour

BACKGROUND QUESTIONS:

1. What is your understanding about this opportunity/position and why does it interest you?

_____
_____
_____
_____
_____
_____
_____

2. How will your skills and experience benefit this role?

_____
_____
_____
_____
_____
_____
_____

3. What goals have you set for yourself and what have you done to achieve them thus far?

_____
_____
_____
_____
_____
_____
_____

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RELEVANT KNOWLEDGE AND SKILLS

Definition: *Possessing the necessary knowledge and skills to meet the job demands.*

Question 1: Legislation is very important in business and especially in HR. Based on the various legislation in South Africa, what are the top three most important legislation in HR? Substantiate your answer.

Top 3 important legislation:
Reason:
Additional Comments:

Rating: _____

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RELEVANT KNOWLEDGE AND SKILLS

Definition: *Possessing the necessary knowledge and skills to meet the job demands.*

Question 2: What are the various functions of HR? Could you briefly explain a general organizations recruitment process from a HR consultants perspective?

Functions:
Recruitment process:
Additional Comments:

Rating: _____

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PLANNING AND ORGANISING

Definition: *Organising information and determining courses of action for oneself and others, taking relevant factors into account.*

Question 1: Describe a time when you were unable to meet a deadline? What happened/what did you do?

Situation:
Action:
Result:

Rating: _____

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PLANNING AND ORGANISING

Definition: *Organising information and determining courses of action for oneself and others, taking relevant factors into account.*

Question 2: Tell me about a time where you had to coordinate and/or assist with a task/project/event. What did you have to do? How did you go about executing it? What was the outcome?

Situation:
Action:
Result:

Rating: _____

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ACTION ORIENATION

Definition: *Willingness to take action to accomplish tasks, maintaining a high level of motivation and energy.*

Question 1: Describe how keep yourself motivated to complete tasks/deadlines? When handling multiple tasks/deadlines explain how you prioritize and ensure that everything is completed timeously?

Situation:
Action:
Result:

Rating: _____

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ACTION ORIENATION

Definition: *Willingness to take action to accomplish tasks, maintaining a high level of motivation and energy.*

Question 2: Reaching goals can be quite challenging. Describe a time where you were faced with a challenging goal and how you overcame it.

Situation:
Action:
Result:

Rating: _____

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ABILITY TO LEARN

Definition: *Ability to assimilate, understand and apply new information.*

Question 1: Describe a time where you had to research new information for a task or project. How did you go about collating all the information? How did you make sure the information was relevant and up to date in your field? What was the outcome?

Situation:
Action:
Result:

Rating: _____

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ABILITY TO LEARN

Definition: *Ability to assimilate, understand and apply new information.*

Question 2: Tell me about a time where you willingly assisted a colleague on a task project that was not required of your role. What was the situation? What was your role? How did you assist in the situation? What was the end result?

Situation:
Action:
Result:

Rating: _____

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ATTENTION TO DETAIL

Definition: *Taking relevant and complex details into account.*

Question 1: Describe a situation where you had to work on multiple tasks at the same time. How did you manage the various tasks? What was the outcome of the tasks/situation?

Situation:
Action:
Result:

Rating: _____

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ATTENTION TO DETAIL

Definition: *Taking relevant and complex details into account.*

Question 2: Tell me about a time where you had to hand in/deliver on a complex and important task/project that required attention to detail? How did you manage to make sure that the task/project was of high quality or standard? What was the outcome of the task/project?

Situation:
Action:
Result:

Rating: _____

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ANALYTICAL THINKING

Definition: *Understanding a situation by breaking it apart into smaller pieces or tracking the implications of situations in a step by step way.*

Question 1: Describe a time where you dealt with a difficult situation recently. What were the steps you had to take to resolve it? What was the end results?

Situation:
Action:
Result:

Rating: _____

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ANALYTICAL THINKING

Definition: *Understanding a situation by breaking it apart into smaller pieces or tracking the implications of situations in a step by step way.*

Question 2: What was the most difficult decision you have had to make? What was your decision and the outcome of your decision? How did you go about deciding your given choice?

Situation:
Action:
Result:

Rating: _____

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ADAPTABILITY

Definition: *Maintaining effectiveness in varying environments and with different people, tasks and responsibilities*

Question 1: Tell me about a time when you received critique or negative feedback from you're a colleague/ lecturer/manager. Describe how you handled this feedback?

Situation:
Action:
Result:

Rating: _____

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WESTERN CAPE

ADAPTABILITY

Definition: *Maintaining effectiveness in varying environments and with different people, tasks and responsibilities*

Question 2: Tell me about a time where you found yourself in a stressful situation. What did you do to cope in the situation? What was the outcome of the situation?

Situation:
Action:
Result:

Rating: _____

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INITIATIVE

Definition: *Originating action and taking the initiative without having to be prompted.*

Question 1: Have you ever taken on a task that was not required of you? If so, what was it and the outcome?

Situation:
Action:
Result:

Rating: _____

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INITIATIVE

Definition: *Originating action and taking the initiative without having to be prompted.*

Question 2: Are you open to broadening your scope of work beyond your day-to-day tasks? If yes/no, why and how? Name a time?

Situation:
Action:
Result:

Rating: _____

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COMPETENCY-BASED INTERVIEW RATING GUIDE

The below competencies and respective behavioural indicators should be utilised as a guide when rating participants on the below rating guide (5-point Likert scale).

Rating Guide (5-point Likert Scale):

DEFINITION	WELL BELOW REQUIREMENTS	BELOW REQUIREMENTS	MEETS MOST REQUIREMENTS WITH DEVELOPMENT	ABOVE REQUIREMENTS	WELL ABOVE REQUIREMENTS
RATING	1	2	3	4	5
DESCRIPTION	Does not meet requirements for the role. Significant development is required.	Does not meet most requirements for the role. Significant development is required.	Meets most requirements for the role. Some development is required.	Meets all and exceeds in some requirements for the role. Minimal development is required.	Exceeds requirements for the role.

Competency and Behavioural Indicator (BI) Guide:

RELEVANT KNOWLEDGE AND SKILLS

Definition: *Possessing the necessary knowledge and skills to meet the job demands.*

This competency rating will be based on an overall mark based on the participant responses and observer observations.

PLANNING & ORGANIZING

Definition: *Organizing information and determining courses of action for oneself and others, taking relevant factors into account.*

Behavioural Indicators:

- Set priorities
- Establish objectives and milestones
- Establish times and schedule activities
- Identify and allocate resources
- Use tools (e.g. Calendar, files, flip charts)

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COMMUNICATION- ORAL

Definition: *Effective two-way communication with others, including verbal and gestural expression, and listening.*

This competency rating will be based on an overall mark based on the participant responses and observer observations.

ACTION ORIENTATION

Definition: *Willingness to take action to accomplish tasks, maintaining a high level of motivation and energy.*

Behavioural Indicators:

- Makes things happen rather than waiting for things to happen
- Moves into action timeously
- Puts a lot of energy into planning
- Puts a lot of energy into action
- High determination to get things done

ABILITY TO LEARN

Definition: *Ability to assimilate, understand and apply new information.*

Behavioural Indicators:

- Acts to keep skills and knowledge current
- Shows curiosity by exploring beyond the immediate field
- Volunteers to help others with problems
- Takes courses or teaches self new subjects (related to work)
- Actively goes out as a change agent to spread the new information

ATTENTION TO DETAIL

Definition: *Taking relevant and complex details into account.*

Behavioural Indicators:

- Clarifies details of task
- Completes all details
- Check outputs for accuracy and completeness
- Follow established procedures
- Maintains checklist to cover details

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http://etd.uwc.ac.za/

ANALYTICAL THINKING

Definition: *Understanding a situation by breaking it apart into smaller pieces or tracking the implications of situations in a step by step way.*

Behavioural Indicators:

- Sets priorities for tasks in order of importance
- Breaks down a complex task into manageable parts in a systematic way
- Recognizes several likely causes of events, or several consequences of actions
- Anticipates obstacles and thinks ahead about next steps
- Uses several analytical techniques to identify several solutions and weighs the value of each

ADAPTABILITY

Definition: *Maintaining effectiveness in varying environments and with different people, tasks and responsibilities.*

Behavioural Indicators:

- Sees situation objectively
- Flexibly applies rules or procedures
- Adapts tactics to situations or others' responses
- Adapts own strategies, goals or programmes to situation
- Makes organizational adaptations

INITIATIVE

Definition: *Originating action and taking the initiative without having to be prompted.*

Behavioural Indicators:

- Is proactive
- Addresses current opportunities/problems
- Works independently
- Extra effort
- Does more than is required

6. COMPETENCY GRID

The below competency grid outlines each competency that is assessed per simulation)

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http://etd.uwc.ac.za/

COMPETENCY GRID

INTERN INDUSTRIAL ORGANISATIONAL PSYCHOLOGIST

		SIMULATIONS	
		In-Basket Activity	Competency-Based Interview
COMPETENCIES	Relevant knowledge and skill	X	X
	Planning and organizing	X	X
	Communication - Oral	---	X
	Communication – Written	X	---
	Action Orientation	X	X
	Ability to learn	---	X
	Attention to detail	X	X
	Analytical thinking	X	X
	Adaptability	X	X
	Initiative	X	X

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7. INDIVIDUAL ASSESSMENT RATING SHEET

7.1 IN-BASKET PARTICIPANT ASSESSMENT RATING SHEET

IN-BASKET PARTICIPANT ASSESSMENT RATING SHEET

http://etd.uwc.ac.za/

INTERN INDUSTRIAL ORGANISATIONAL PSYCHOLOGIST

Participant Name & Surname: _____

		In-Basket Activity Tally	Total
COMPETENCIES	Relevant knowledge and skill		
	Planning and organizing		
	Communication - Oral	---	---
	Communication – Written		
	Action Orientation		
	Ability to learn	---	---
	Attention to detail		
	Analytical thinking		
	Adaptability		
	Initiative		
	TOTAL		

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Continuation…

		SIMULATIONS		FINAL RATING
		Total of competency	Total of competency divided by competency frequency in all items	Final Result on 5-point scale
COMPETENCIES	Relevant knowledge and skill			
	Planning and organizing		/ 4	
	Communication - Oral	---	---	---
	Communication – Written			
	Action Orientation		/ 3	
	Ability to learn	---	---	---
	Attention to detail		/ 3	
	Analytical thinking		/ 4	
	Adaptability		/ 3	
	Initiative		/ 3	

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IN-BASKET PARTICIPANT ASSESSMENT RATING SHEET
INTERN INDUSTRIAL ORGANISATIONAL PSYCHOLOGIST

Participant Name & Surname: _____

		In-Basket Activity Tally	Total
COMPETENCIES	Relevant knowledge and skill		
	Planning and organizing		
	Communication - Oral	---	---
	Communication – Written		
	Action Orientation		
	Ability to learn	---	---
	Attention to detail		
	Analytical thinking		
	Adaptability		
	Initiative		
	TOTAL		

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Continuation…

		SIMULATIONS		FINAL RATING
		Total of competency	Total of competency divided by competency frequency in all items	Final Result on 5-point scale
COMPETENCIES	Relevant knowledge and skill			
	Planning and organizing		/ 4	
	Communication - Oral	---	---	---
	Communication – Written			
	Action Orientation		/ 3	
	Ability to learn	---	---	---
	Attention to detail		/ 3	
	Analytical thinking		/ 4	
	Adaptability		/ 3	
	Initiative		/ 3	

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IN-BASKET PARTICIPANT ASSESSMENT RATING SHEET
INTERN INDUSTRIAL ORGANISATIONAL PSYCHOLOGIST

Participant Name & Surname: _____

		In-Basket Activity Tally	Total
COMPETENCIES	Relevant knowledge and skill		
	Planning and organizing		
	Communication - Oral	---	---
	Communication – Written		
	Action Orientation		
	Ability to learn	---	---
	Attention to detail		
	Analytical thinking		
	Adaptability		
	Initiative		
	TOTAL		

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Continuation…

		SIMULATIONS		FINAL RATING
		Total of competency	Total of competency divided by competency frequency in all items	Final Result on 5-point scale
COMPETENCIES	Relevant knowledge and skill			
	Planning and organizing		/ 4	
	Communication - Oral	---	---	---
	Communication – Written			
	Action Orientation		/ 3	
	Ability to learn	---	---	---
	Attention to detail		/ 3	
	Analytical thinking		/ 4	
	Adaptability		/ 3	
	Initiative		/ 3	

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7.2 COMPETENCY-BASED INTERVIEW PARTICIPANT ASSESSMENT RATING SHEET

COMPETENCY-BASED INTERVIEW PARTICIPANT ASSESSMENT RATING SHEET

INTERN INDUSTRIAL ORGANISATIONAL PSYCHOLOGIST

Participant Name & Surname: _____

		Competency-Based Interview Tally	Total
COMPETENCIES	Relevant knowledge and skill		
	Planning and organizing		
	Communication - Oral		
	Communication – Written	---	---
	Action Orientation		
	Ability to learn		
	Attention to detail		
	Analytical thinking		
	Adaptability		
	Initiative		
	Background Questions		
	TOTAL		

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Continuation…

		SIMULATIONS		FINAL RATING
		Total of competency	Total of competency divided by competency frequency	Final Result on 5-point scale
COMPETENCIES	Relevant knowledge and skill			
	Planning and organizing			
	Communication - Oral			
	Communication – Written	---	---	---
	Action Orientation			
	Ability to learn			
	Attention to detail			
	Analytical thinking			
	Adaptability			
	Initiative			

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COMPETENCY-BASED INTERVIEW PARTICIPANT ASSESSMENT RATING SHEET

INTERN INDUSTRIAL ORGANISATIONAL PSYCHOLOGIST

Participant Name & Surname: _____

		Competency-Based Interview Tally	Total
COMPETENCIES	Relevant knowledge and skill		
	Planning and organizing		
	Communication - Oral		
	Communication – Written	---	---
	Action Orientation		
	Ability to learn		
	Attention to detail		
	Analytical thinking		
	Adaptability		
	Initiative		
	Background Questions		
	TOTAL		

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Continuation…

		SIMULATIONS		FINAL RATING
		Total of competency	Total of competency divided by competency frequency	Final Result on 5-point scale
COMPETENCIES	Relevant knowledge and skill			
	Planning and organizing			
	Communication - Oral			
	Communication – Written	---	---	---
	Action Orientation			
	Ability to learn			
	Attention to detail			
	Analytical thinking			
	Adaptability			
	Initiative			

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COMPETENCY-BASED INTERVIEW PARTICIPANT ASSESSMENT RATING SHEET

INTERN INDUSTRIAL ORGANISATIONAL PSYCHOLOGIST

Participant Name & Surname: _____

		Competency-Based Interview Tally	Total
COMPETENCIES	Relevant knowledge and skill		
	Planning and organizing		
	Communication - Oral		
	Communication – Written	---	---
	Action Orientation		
	Ability to learn		
	Attention to detail		
	Analytical thinking		
	Adaptability		
	Initiative		
	Background Questions		
	TOTAL		

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Continuation…

		SIMULATIONS		FINAL RATING
		Total of competency	Total of competency divided by competency frequency	Final Result on 5-point scale
COMPETENCIES	Relevant knowledge and skill			
	Planning and organizing			
	Communication - Oral			
	Communication – Written	---	---	---
	Action Orientation			
	Ability to learn			
	Attention to detail			
	Analytical thinking			
	Adaptability			
	Initiative			

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8. DATA-INTEGRATION GRID

Participant Name & Surname: _____

		SIMULATIONS		FINAL RATING
		In-Basket Activity	Competency-Based Interview	(Sum of simulation scores divided by 2)
COMPETENCIES	Relevant knowledge and skill			
	Planning and organizing			
	Communication - Oral	---		
	Communication – Written		---	
	Action Orientation			
	Ability to learn	---		
	Attention to detail			
	Analytical thinking			
	Adaptability			
	Initiative			

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DATA-INTEGRATION GRID

Participant Name & Surname: _____

		SIMULATIONS		FINAL RATING
		In-Basket Activity	Competency-Based Interview	(Sum of simulation scores divided by 2)
COMPETENCIES	Relevant knowledge and skill			
	Planning and organizing			
	Communication - Oral	---		
	Communication – Written		---	
	Action Orientation			
	Ability to learn	---		
	Attention to detail			
	Analytical thinking			
	Adaptability			
	Initiative			

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DATA-INTEGRATION GRID

Participant Name & Surname: _____

		SIMULATIONS		FINAL RATING
		In-Basket Activity	Competency-Based Interview	(Sum of simulation scores divided by 2)
COMPETENCIES	Relevant knowledge and skill			
	Planning and organizing			
	Communication - Oral	---		
	Communication – Written		---	
	Action Orientation			
	Ability to learn	---		
	Attention to detail			
	Analytical thinking			
	Adaptability			
	Initiative			

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9. FINAL ASSESSMENT RATING SHEET

		Candidate 1: _____	Candidate 2: _____	Candidate 3: _____
COMPETENCIES	Relevant knowledge and skill			
	Planning and organizing			
	Communication - Oral			
	Communication – Written			
	Action Orientation			
	Ability to learn			
	Attention to detail			
	Analytical thinking			
	Adaptability			
	Initiative			
	Background Questions			
	TOTAL			

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Appendix G: Ethical Clearance Approval Form

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OFFICE OF THE DIRECTOR: RESEARCH
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12 November 2018

Ms M White
Industrial Psychology
Faculty of Economic and Management Sciences

Ethics Reference Number: HS18/6/26

Project Title: An intervention study to investigate development centres as an avenue to improve the self-efficacy of university graduates.

Approval Period: 12 November 2018 – 12 November 2019

I hereby certify that the Humanities and Social Science Research Ethics Committee of the University of the Western Cape approved the methodology and ethics of the above mentioned research project.

Any amendments, extension or other modifications to the protocol must be submitted to the Ethics Committee for approval.

Please remember to submit a progress report in good time for annual renewal.

The Committee must be informed of any serious adverse event and/or termination of the study.

Ms Patricia Josias
Research Ethics Committee Officer
University of the Western Cape

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