

THE RELEVANCE OF CAREER COUNSELLING IN HIGHER EDUCATION: A STUDY FOLLOWING STUDENTS AT A SOUTH AFRICAN UNIVERSITY

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Abstract

Very few students in South Africa (SA) receive adequate career counselling at school and often arrive at institutions of higher learning without a clear sense of what their prospective careers will entail. The limited access to career counselling and assessment is further compounded by criticisms of popular career assessment instruments used in SA, where the primary goal of career counselling and assessment is to match clients to careers for job placement. This approach no longer serves the needs of a diverse SA population and disregards contextual influences on careers. Therefore, a need exists to understand and inform career counselling interventions and to guard against the provision of de-contextualised and contextually insensitive approaches. Moreover, changes in the workplace, where career change has become the norm as the world of work has moved away from stability and permanency to fluidity, calls for a contemporary response from career counselling theories, practitioners as well as researchers, to equip clients with the necessary skills to respond to these changes. Thus, SA institutions of higher learning need to innovate their practices to more inclusively, effectively, and justly serve the needs of a diverse student population for work success in a developing nation and a complex world.

This study aimed to evaluate the relevance and effectiveness of a university's career counselling services from the students' perspectives. It focuses on gaining an indication of the perceived effectiveness of assessment measures used, and to ascertain the influences that impact on individual students' career decision-making over the course of undergraduate studies. Due to the increasing recognition for the need to develop a contextualised approach to career development interventions, this study included the SACII, a locally developed interest inventory as part of a career assessment battery, with a group of university students.

A pragmatic approach using mixed-methods was used. Multiple case studies of the career trajectories of a cohort of undergraduate students who had undertaken career assessments at the university career centre, were tracked longitudinally over the course of undergraduate studies. Data were generated through vignettes that included the 13 participants' career assessment reports, a service evaluation questionnaire and two successive follow-up interviews. Each participant's first follow-up interview occurred six months after their career assessment feedback session; and the second follow-up was in the final year of undergraduate studies, after eighteen months. Descriptive statistical analysis summarised the basic features of the quantitative data from the evaluation questionnaire. Thematic analysis was used for organisation and analysis of the follow-up interview data.

Findings were that the career counselling and assessment facilitated greater self-knowledge in relation to career decision-making, assisted with selecting degree major subjects and enhanced career planning abilities. Using locally developed assessment measures in career counselling proved to be useful. Exploring career development from an overarching developmental contextual framework that is applicable and well-suited to the SA context provided a deeper understanding of contextual influences that impact on students' career decision-making processes.

KEYWORDS: career counselling, longitudinal follow-up of students, indigenous psychological approaches, career assessments in higher education, developmental contextual framework

Declaration

I, Christine Lewis, declare that this research is a result of my own work, except where otherwise stated. I have given the full acknowledgement of the sources referred to in the text. This study has not been submitted before for any degree or examination at any university.

This thesis has been formatted according to the APA 7th Edition referencing technique.

A handwritten signature in black ink, appearing to read 'Christine Lewis', with a stylized, cursive script.

Christine Lewis

February 2023

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To God be ALL the glory!

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List of Abbreviations

BE:	Behaviour Episode
CIP:	Career Interest Profile
DCF:	Developmental Contextual Framework
ELETSA:	Academic Advising Association
GRT:	General Reasoning Test
HE:	Higher Education
JTI:	Jung Type Indicator
LSVD:	Living Systems Theory of Vocational and Behaviour and Development
OIP:	Occupational Interest Profile
RUCC:	Rhodes University Career Centre
SA:	South Africa
SAACDHE:	Southern Africa Association of Counselling and Development in Higher Education
SACII:	South African Career Interest Inventory
STF:	Systems Theory Framework
SWI:	Satisfaction with the Intervention questionnaire
VMI:	Values and Motives Inventory

Chapter 1: Introduction and Orientation

Background to the problem

Higher Education Institutions (HEIs) currently offer a range of career counselling and academic support services to students and prospective students (Kay & Fretwell, 2003; Schoeman et al., 2021). However, at many institutions, there often seem to be a lack of physical and human resources to provide such services, as well as indifference to counselling services on the part of students (Chireshe, 2012). The lack of wider access to career counselling includes high failure rates and dropouts in HE (Moodley & Singh, 2015), which are societal concerns. Career counselling and assessment provision have also been characterised by affordability and accessibility issues (Laher & Cockroft, 2017). Another concern is the need to contextualise career development and intervention so that young people are able to make informed career decisions (Rawatlal, 2022). The South African HE system needs to adopt a contemporary perspective on career assessment and counselling that is more suitable to student needs to help shape the development of a vibrant, viable and vital vision for career counselling (Hartung, 2009). A vision for career services was restated in the Government Gazette (Department of Higher Education and Training, 2016, p.7):

All citizens of all ages, have access to quality career information and career services throughout their lives, so that they are able to make better and more informed career and life decisions that deliver high levels of employment and help increase sustainable economic growth in the country and enhance their full participation in the overall development of South Africa.

Moreover, global changes in the workplace where career change has become the norm, as the world of work has moved away from stability and permanency to fluidity (Watson & Stead, 2017), calls for a contemporary response from career counselling theories and practitioners as well as researchers to equip clients with the necessary skills to respond to these changes (Maree, 2013). Consequently, career psychology is seeking appropriate approaches to respond to diverse client groups and to integrate career assessment with narrative approaches to career counselling (Zytowski, 2015). This substantiates the need for counselling centres or units to take responsibility to conduct ongoing evaluation and accountability research, in order to assess the effectiveness of their services and to find ways to improve these (Cilliers et al., 2010).

In this introductory chapter, the background to the problem being addressed by this research is explored, and the purposes and relevance of this research are elaborated on. It outlines the geographical area in which this research is located. The research approach used in conducting

this research and personal motivations for conducting this research are also provided. Key definitions of concepts are briefly explained, and the chapter ends with a brief overview of the thesis to follow.

Career counselling and career assessment in SA

Counselling theories provide counsellors with the foundation to establish “best practice” in the interest of clients (Maree, 2013; Patton & McMahon, 2006); and career theories provide parameters within which to understand and hypothesise about career behaviour and choice. Theory provides career counsellors with the means to identify, interpret and assist clients in their career goals (Watson & Stead, 2006) and allow predictions of career behaviour and what may impact future career choices (Zunker, 2012).

Career education in SA has historically utilised theories of career development that take de-contextualised and overemphasised individualistic approaches to career education (Stead & Watson, 2002). In the more predictable work environments of the past, the notion of preparing people for stable career paths served a useful purpose (Maree, 2013), but the premise of matching individuals to jobs is fading as the digital revolution produces jobless work (Savickas, 2011). The workplace, work content and work values are also changing, and characterised by change and uncertainty. People are expected to become more adaptable, to acquire skills to regulate and manage themselves in the absence of stable organizational structures (Maree, 2013). So-called objective (psychometric) tests often fail to adequately assess subjective or phenomenological career counselling experiences and variables (Hartung, 2010). This has led to developments of social constructionist and narrative approaches to career counselling (Watson & McMahon, 2013) but these are not the focus of the study. A more contextualised approach to understanding and informing career development theory and interventions within SA continues to be advocated for (Maree, 2013; Stead, 1996).

As a response to such calls, earlier studies (reported in Akhurst & Spencer, 2000; Phala, 2019; Roberson, 2018) utilised the Developmental Contextual Framework (DCF) of career development (Vondracek et al., 1986) to understand and inform career counselling interventions and to guard against the provision of de-contextualised and contextually insensitive approaches. The value of the framework was that it provided a structure into which the content relevant to participants could be inserted (Roberson, 2018). In practice, career counsellors determine the relevance of extant theoretical constructs for individual clients; the individual in context is emphasised over theory; and by encouraging clients to tell career stories, they ascertain how the multiple voices and positions of the dialogical self contribute to individuals’ constructions, leading to co-constructing career-related stories of life themes. As

a result, clients play a more active role in constructing their future identities and career stories, gaining more agency through such processes (Patton & McMahon, 2017).

Considerable concern has been expressed about the reliability and validity of many psychometric measures that have been standardised for various SA population groups (Foxcroft et al., 2005). Sehlapelo and Terre Blanche (1996, p.49) stated that “if psychology as a profession is truly interested in empowerment, the reform of testing practices should be one of its priorities”. Career measures make assumptions about what the relevant and appropriate factors in the career choice process are – assumptions that have yet to be tested on the majority in SA. Therefore, the need exists for SA career counsellors to research the efficacy of all career theories, to assess their utility in this country (Watson & Stead, 2006). Several authors have pointed out that Parsons’s (1909) theory focused on empowering marginalised groups and that this focus needs to be revisited by modern career theories, to foreground social justice (Watson & Stead, 2006). Parsons’ principles of career interventions were not limited to assessing clients with the hope of matching individuals and occupations (O’Brien, 2001). He emphasised self-understanding as a reflective process rather than as a product reported in a test score (McMahon & Watson, 2015), thus being congruent with more integrated approaches to career counselling, which are being advanced today.

Career assessment encourages the gathering and interpretation of psychometric information at a point in time, rather than a process approach to career counselling that would more actively involve the client (Watson & McMahon, 2013). Assessment tools may thus be utilised in stereotypical and limited ways (McIlveen & Perera, 2019). De Bruin and De Bruin (2006) warn against stereotypical perceptions of standardised career test usage in SA, depending on the use to which the tests are put and the manner in which these are done, which can be helpful or not. Therefore, whether assessments have served us well would depend on how they have been incorporated into the career assessment process (Watson & McMahon, 2013), integrated with the counselling process within which career assessment is embedded (McMahon & Watson, 2015).

Assessment can add value if the specific tests are culturally appropriate, psychometrically sound and used in a fair and ethical manner (Foxcroft et al., 2005); and ensuring that tests are adapted and standardised for local contexts (Laher & Cockcroft, 2014). Tests may be more objective than alternative methods such as interviews; and they also provide structure in sessions with clients, aiding in information gathering and evaluation. Quantitative career assessment also needs to be qualitatively understood, since any assessment without contextualisation runs the risk of being limited in its interpretation, especially in a developing world context with a diversity of cultural groups (Watson & McMahon, 2013). Triangulating and

crystallising assessment results, to ensure greater reliability, is best achieved by using a combination of quantitative and qualitative assessment techniques, while at the same time it is helpful to assess clients on different occasions to determine profile consistency (Maree, 2013). Donald et al. (2014) encourage more research on the ways in which assessment is experienced by recipients of assessment practices, with a broader and more critical approach to assessment in SA, especially if assessments are likely to be perceived as fair and equitable practice.

The concept of career adaptability additionally provides some ideas that might influence career choice. Some clients simply are not ready or prepared enough to make an optimal career choice. This may become clear in the intake interview or from the results of other assessment instruments and inventories (Zunker, 2012). In practice therefore, when counselling clients in the process of forming their identity and career self-concepts, counselling psychologists need to consider which combination of approaches might be suitable, considering the time and resources available, in order to facilitate the transition to tertiary education or work life (Maree, 2010b).

Relevance of and motivation for this study

SA HEIs seek to innovate their practices to more inclusively, effectively, and justly serve the needs of a diverse student population for work success in a developing nation and a complex world (Hartung, 2009; Maree, 2013). The science of career psychology and the practice of career guidance and counselling share in this aim. Career guidance and counselling comprises a profession of international scope, enabling practitioners who provide career services to help people across the lifespan to make satisfying career choices, adjust to those choices, and develop their lives through work and other domains of human activity (Savickas, 2013; Schreuder & Coetzee, 2016). Change and opportunity brought by diversity, shifting political and economic conditions, and widespread changes in the world of work require both HE and career counselling to take transformative action to reinvigorate their sense of identity and common mission (Autin et al., 2020; Hartung, 2009) to improve human welfare by promoting the role of work in all people's lives. In combination, HE along with career counselling and career psychology need to transform themselves to ensure accessibility and efficacy of services for all people across the life span, to remain relevant, viable, and respond effectively to the realities of workers and work in contemporary life (Maree, 2013).

These fields must undergo a revitalisation of their models, methods, and materials in order to effectively address the needs of very diverse populations within a highly complex and fluid 21st-century world of work (Blustein 2006; Rawatlal, 2022; Savickas & Baker 2005; Watson 2004). As a step in revitalising the profession, many career counsellors around the world have

begun more earnestly to incorporate career assessment and counselling models and methods that can better account for the nuanced contexts within which people make career decisions (Hartung, 2009; Maree, 2013, 2021). Collaborative approaches at various levels of the system may offer possible directions for innovative and responsive career counselling (Akhurst & Liebenburg, 2009).

Joining with career counselling professionals internationally, the SA HE system needs to adopt a contemporary perspective on career assessment and counselling to help to shape the development of a viable and valid vision for career counselling to provide career services to students (Hartung, 2009; Maree, 2013, 2021). The establishment of the first Academic Advising Association (ELETSA) in 2021 is a step towards achieving this goal, by centralising and providing a scope for best practices.

Linking modern and postmodern perspectives on career assessment and counselling, augmenting the traditional matching model and incorporating both psychometric assessments and personal stories can move the field toward better attending to the multiple factors involved in career choice, development, and work adjustment (Maree, 2013, 2018). Adopting an approach that uses contemporary perspectives to build on established models and methods may improve the prospects for reaching the goal of more appropriate practices of career counselling within the context of HE in SA (Hartung, 2009; Rawatlal, 2022).

A review of the literature on the SA HE system reveals that inadequate career counselling tends to reinforce the low social and economic position of the many marginalised people in SA. Very few disadvantaged students ever receive adequate career counselling at school and often arrive at HEIs without a clear sense of what their prospective careers will entail (Maree, 2012). Moreover, for students to succeed, it is important that they are connected to the wide range of support services in a meaningful way. Unfortunately, many students (especially first-generation students) find it difficult to connect to university environments that are complex (Tiroyabone & Strydom, 2021). Therefore, students need to be provided with adequate career counselling to give them a clear sense of the future and knowledge about what career to pursue (Maree, 2012) and these services should be provided early in their career journeys.

The limited access to career counselling and assessment is further compounded by criticisms of popular career assessment instruments used in SA (Morgan et al., 2014). In particular, concerns have been raised regarding the content validity and cross-cultural applicability of these instruments (Akhurst & Mkhize 2006; Foxcroft et al., 2004; Laher & Cockcroft, 2014; Morgan et al., 2014; Stead & Watson, 1998). Wide applications of these inventories across diverse groups in SA might lead to practitioners providing inaccurate career information and occupational recommendations (Darcy & Tracey, 2007). However, considering the current

efforts to develop and refine local psychometric instruments (see Rabie, 2017), dismissing psychometric instruments in career assessment and counselling may be premature. Confirmatory evidence suggests that employing the use of locally developed assessment tools, within diverse SA contexts allows for greater efficacy in career assessment and counselling practice (Morgan et al., 2014; Rabie & Naidoo, 2019).

Counsellors and students use results of career assessment tools to help students with their career planning, decision making and choices (Hartung, 2010). Counsellors may need to assume the role of teacher or coach and provide learning and exploration activities designed to enhance self-knowledge, improve problem-solving skills and increase the client's work knowledge base (Zunker, 2012). Thus, in practice, career development practitioners are positioned as facilitators of processes that generate experiences for clients and facilitate the learning of skills, insights into interest, beliefs, values, work habits and personal qualities for adjusting to the constantly changing work environment (McMahon et al., 2015).

The literature indicates a paucity of articles evaluating the provision of career counselling services. In one study, the career counselling centre of the University of Lausanne used a questionnaire (Masdonati et al., 2009) to evaluate students' experiences of the career counselling services and interventions. Results obtained from 188 clients indicate that the working alliance played a central role in career counselling effectiveness and this study highlighted the importance of relational factors between client-counsellor, including agreement on goals and on the way to reach them. Given the complexity of all the elements described above that contribute to career counselling, a longitudinal evaluation of the efficacy of services seems timely.

Location of study

This research is located in South Africa, one of the most socioeconomically unequal countries in the world (Amnesty International, 2020). In particular, the study was conducted in Makhanda (previously known as Grahamstown), a city in the Eastern Cape province, one of the nine SA national provinces, and the second largest. The province is bordered by the Western Cape and Kwa-Zulu Natal provinces and is one of the three most rural provinces in the country (Hendricks, 2008). The Eastern Cape is also notably one of the poorer provinces in SA, having high numbers of impoverished people and people who are unemployed. Makhanda is a small city that was established in 1812 as a military garrison, which quickly took on economic importance on the eastern frontier of the Cape Colony (Reynolds & Reynolds, 1974). The contemporary economy of the city is dominated by education institutions, a legal industry connected to the High Court and tourism products in the form of creativity and the arts, festivals including the National Arts Festival and SciFest Africa, heritage, and wildlife safaris. The

education institutions, in particular, have a large footprint through the presence of both public and private institutions in the form of primary and secondary schools as well as Rhodes University at a tertiary level (Hoefnagels et al., 2022). The city has retained many of the spatial legacies of the past in the way that the city is demarcated and can be seen in the division between very impoverished communities living alongside seemingly privileged and more affluent communities. In addition, a struggling and dysfunctional municipality has meant that the delivery of basic services and the maintenance of key infrastructure are under threat (Irvine, 2021).

Rhodes University is established and well-regarded; it is mainly residential, and the only rural research-intensive university in SA. As the smallest university in SA, it has a student population of just over 8200 students, of which around 70% are undergraduate and 30% are postgraduate. Rhodes University provides an education to a very diverse student body, demographically. It has registered students from rural and urban settings, from private and government high schools, and from families at every economic level. It attracts students from all over the country, other parts of Africa and, to a smaller extent, from other continents. Over 18% of students are international students from 54 countries, making it a diverse knowledge institution and enhancing the cosmopolitan character of campus life (Rhodes University, 2023a).

Rhodes students have easy access to academic staff and close supervision, with the most favourable academic staff-to-student ratio among SA universities (Rhodes University, 2023a). For many departments, there may still be an elite approach to teaching with small class tutorial or seminar-type instruction with a lecturer, where the goal is to shape the character of the student, and a personal relationship is developed between lecturer and student (Myers, 2018). Rhodes University is organised into six faculties: Commerce, Education, Humanities, Law, Pharmacy and Science. The majority of enrolments (undergraduate and postgraduate) are in the Humanities and Social Sciences (including Education), followed by Commerce and Science (Chambers, 2010).

Almost 50% of Rhodes students and most undergraduates live in University residences, while there are also special residences for postgraduates. Through a well-established structure of wardens, sub-wardens and residence committees, the residences play an important role in overall student development, including developing leadership skills. Numerous clubs and societies provide extensive opportunities for students to participate in various intellectual, social, cultural, and sports activities and further develop valuable skills (Rhodes University, 2023a).

Rhodes University's Careers Centre (RUCC) forms part of the student support structures under the auspices of the Division of Student Affairs. It offers career counselling, career assessments and various workshops to students and prospective students to assist them in their career planning and career development. Students get wide exposure to study and career opportunities with professional guidance to help match interests and abilities with career options. Annually, the centre also runs a well-subscribed Graduate Placement Programme where national and international employers visit to recruit students (Rhodes University, 2023b).

Research Aim and Questions

The aim of this study was to evaluate the relevance and effectiveness of a university career counselling service from the students' perspectives. It focused on gaining an indication of the perceived effectiveness of the assessment tools used and to ascertain the influences that impact individual students' career decision-making, over the course of undergraduate studies.

The aims of this research study were three-fold. Firstly, it responded to the call for counselling centres in HE to conduct on-going evaluation and accountability research, in order to assess the effectiveness of their services and to find ways to improve these (Cilliers et al., 2010). Such information may be useful in informing how career counselling might be tailored and applied to make it more useful to the diversity of students, especially the many students who, according to Maree (2012), receive little to no prior career counselling.

Secondly, due to the increasing recognition of the need to develop a contextualised approach to career development interventions, it aimed to assess the suitability of the South African Career Interest Inventory (SACII) (Morgan, 2014), a locally developed interest inventory, on a group of university students. Such information could have practical implications, to allow for greater efficacy in career assessment and counselling practice (Rabie, 2017).

Thirdly, it aimed to gather relevant information on which factors appear to impact and influence career decision-making and assist students to make career-related decisions. It also aimed to collect information on the students' subsequent career trajectories, over the course of their degree studies. Such information may be useful to inform career practitioners on ways to support students in their career development. This research therefore attempted to answer the following research questions:

- 1 What is the relevance and effectiveness of career services at a university?
- 2 What role do psychometric assessments play to assist students in their career decision-making?

- 3 Which factors appear to impact career decision-making and assist students to make career-related decisions?
- 4 How do students' study trajectories unfold after their career assessment and which influencing factors become evident?

Research Approach

A pragmatic approach to inquiry was appropriate for this study. This situates the researcher in a natural setting, where the researcher who is a counselling psychologist providing career counselling to students at a university career centre, further engages in ongoing communication with those in the inquiry context (students), seeking support for the practical value of what is being studied (Green & Hall, 2010). Pragmatism is a good fit for this study as the research provides an important opportunity to reflect on outcomes, goals, assumptions and values; and considers the ways in which the data might inform and support possible actions for future practice.

This study employed a mixed-method approach (Creswell, 2014), including the analysis of both qualitative and quantitative data. In addition, the study generated multiple case studies (Yin, 2018) of a cohort of undergraduate students who had undertaken career assessments at the university career centre, whose career trajectories were tracked over the course of their undergraduate studies. Data gathering comprised vignettes that included 13 participants' career assessment reports, a service evaluation questionnaire and two longitudinal follow-up interviews. Each participant's first follow-up interview followed after a 6-months gap from their career assessment feedback session and the second follow-up was in the final year of undergraduate studies, 18 months later. Descriptive statistical analysis were used to interpret the quantitative data generated from the evaluation questionnaire. Template analysis (Braun & Clarke, 2006) was used for thematic organisation and analysis of the qualitative data.

Personal motivation

Very briefly, behaviour episodes (BE) are context specific, goal directed patterns which unfold over time and form the basic unit for creating and understanding career developmental pathways (Vondracek et al., 2014). I explain my personal motivation for this study by drawing from my own BE activity pathways that led to my career pathways and interest in this study. I will also share an analysis of how different aspects of my career pathway met the four vocation pathway criteria (Vondracek et al., 2014), which are: (1) satisfactory work activities and context, (2) satisfying income, (3) availability of employment opportunities, and (4) opportunities to become knowledgeable, skilled and effective.

My interest in psychometric assessment may be traced back to my earlier years of studying where I was introduced to psychological assessments. During my honours degree in psychology, I developed a questionnaire as part of a required component for a psychometric subject. I then used this questionnaire for my research project, a requirement for a research module. My lecturers and supervisors were excited and supportive, noticing my keen interest in psychometrics (instrumental BE coupled with a responsive environment).

My interest in psychometric assessments was further ignited during my Master's in Counselling Psychology and internship training. Being a young aspiring practitioner at the time, I had first-hand experience of how psychometric assessments can be a positive experience for clients and practitioners, helping to provide clarity, guidance, insight, a sense of future and having the potential to assist towards a better life. I have also been exposed to the ways that such practice can be a negative encounter for clients, when used and understood outside of context, or decontextualised (observational and instrumental BE episode).

My interest in psychometric assessment was recognized by my internship supervisors and the Director who initiated my first job after I completed my internship and registered as a psychologist. I administered the Differential Aptitude Test (DAT) to grade 9 learners across the Border region of the Eastern Cape to assist learners with their subject choices (Instrumental BE). I was also volunteering at Families South Africa (FAMSA) at the same time, teaching learning receptiveness skills to Grade 9 learners, therefore using both my qualification in education (PGCE) and Counselling Psychology training (capability belief and instrumental BE). Having these two qualifications also afforded me an opportunity to be part of the leadership camps for Grade 12 learners, where I administered various career interest inventories (i.e., South Africa Vocational Interest Inventory (SAVII) and Jung Personality Questionnaire (JPQ)) to assist learners with their career interest and career decision-making processes (new kinds of instrumental activity patterns in new kinds of contexts).

I thoroughly enjoyed these early career development pathways (satisfying work activities and context). I was then notified by my internship supervisor of a position at a university in the Eastern Cape, Student Counselling Centre (a different career development pathway and satisfactory income), where I was introduced to the Southern Africa Association for Counselling and Development in Higher Education (SAACDHE), where university practitioners (psychologists, psychometrists, registered counsellors and social workers) meet to share best practices. It was during this time where I was introduced to a position at Rhodes University career centre (availability of employment opportunities). I applied for the position and thoroughly enjoyed the experience. I was reunited with my "first love", career counselling and career assessments. Working at the centre also included an annual leadership training for Grade 12 learners, and providing career counselling and assessment to Grade 9 to Grade 12 learners (satisfying work activities and context).

I was subsequently provided with many opportunities to become knowledgeable, skilled and effective. I was also appointed as a residence warden, where I am still provided with the opportunity to lead young leaders and contribute towards their career success at university (availability of employment opportunities).

It was at a SAACDHE conference where the idea to conduct research as means to evaluate best practices and using locally developed assessments in practice came about. The conference theme was centered around career development in HE and best practices. Therefore, this research provided an opportunity to become more knowledgeable, skilled and effective as a practitioner.

Definitions and Explanations

Career

The term career encompasses the evolving sequence of employment-related experiences over time and the personal meaning that people attach to these experiences, in the broader contexts of their lives (Schreuder & Coetzee, 2016).

Career Development

Career development is the lifelong evolution of learning and work. It is constituted by psychological, sociological, educational, physical, economic and chance factors that impact upon the nature and meanings of work during the life-span of the individual (Schreuder & Coetzee, 2016).

Strauser et al. (2008) conceptualise career development as consisting of four phases: (1) developing a career identity (the development and awareness of the person's career interests, goals, skills, and talents, effective career decision-making), (2) engaging in effective career decision-making (identifying appropriate work environments that allow to express their career identity), (3) the development of the ability to find a job and find employment and (4) the developing of appropriate work-related behaviours (allowing the individual to meet the demands of the work environment).

Career Counselling

Career Counselling is defined as the process in which a professional career counsellor helps an individual or a group of individuals to make satisfying career-related decisions, utilising psychological theory (Kidd, 2006) and psychological assessment (De Bruin & De Bruin, 2013).

Career counselling potentially assists clients in effectively managing their careers over the course of their lifetimes and facilitates the development of maturity, adaptability and self-efficacy (Schreuder & Coetzee, 2016).

Career assessment

Career assessment refers to a process where career-related information is obtained from various sources to provide data or information that assists in career exploration and self-exploration, to promote individuals' career decision-making (De Bruin & De Bruin, 2006; Sampson, 2009). With reference to the client's context, the counsellor integrates and provides meaning to this information (De Bruin & De Bruin, 2013).

In the context of career counselling, psychological testing broadly refers to the administration and scoring of a variety of aptitude, interest and personality tests (De Bruin & De Bruin, 2013). Therefore, career counselling includes the use of psychological tests and the process of career assessment.

Career exploration

Career exploration is constituted by both self-exploration and environmental exploration. It is the gathering and examination of information regarding career-related matters. These include more awareness of self, the world of work, the formulation of career goals, and career decision-making and strategies (Greenhaus et al., 2010).

Career choice

Career choice refers to the decisions that need to be made or remade in relation to individuals' careers and the world of work (Miller & Brown, 2005). These include subjective decisions based on preferences, aspirations, orientations, and intentions in addition to more objective information regarding economic conditions, employment opportunities and education (Schreuder & Coetzee, 2016).

Career interest

Career interest may be defined as preferences for activities or environments (Hansen & Wiernik, 2018).

Thesis outline

This chapter introduced and provided a background to the research study. It introduces the reader to the location and area in which it occurs, the purpose and relevance of this study, how this research was undertaken and my personal motivations for engaging in this research. Finally, the key concepts related to the study were defined and clarified.

Chapters 2 and 3 are the literature reviews that serve to contextualise this research within existing bodies of literature, providing an overview of career theory to date, while reflecting on its application within the SA context. An overview of career assessment and the commonly used interest inventories in SA is presented. Next, an introduction to the developmental-contextualist perspective that underpins the Vondracek et al. (1986) Developmental Contextual Framework (DCF) of career development is provided. This is followed by an explanation of Vondracek et al.'s (2014) typical behaviour episode, as part of the Living Systems Theory of Vocational Behavioural and Development framework (LSDV).

Chapter 4 outlines the methods employed in conducting this research, presenting the rationale behind the chosen research design, the ethical underpinnings of the study, methods of sampling and the data collection procedure. A description of the data analyses and the related ethical considerations conclude the chapter.

Chapter 5 introduces the multiple case studies, provides an overview of participants' career assessment findings, with a brief overview of participants' career trajectories. The chapter ends with differences and similarities that emerged from the sample of career assessments, by looking at both the interview data and results from the career interest inventories.

Chapter 6 introduces the findings of the evaluation questionnaire used in this study. Chapter 7 draws primarily on the follow-up interviews, presenting a thematic analysis of what influenced and impacted on participants' career decision-making, aiming to illustrate similarities and differences between the cases, with an outline of what emerged over time.

Chapter 8 is the discussion chapter and strives to link the findings to the literature outlined in earlier chapters. Chapter 9 provides a brief conclusion to the research study, including a discussion of the limitations of the study and makes recommendations for career counselling and assessment in HE, as well as for future research.

Chapter 2: Theoretical literature review

The aim of this literature review chapter is to form a theoretical basis for this study, by situating it in established theory. The chapter begins with an overview of career development theory. The first section of this chapter provides a discussion of the trait-and-factor and person-environment approach to career counselling and assessment, discussing each theory as related to the South African context, followed by a review of current theoretical approaches in the 21st century. This provided the initial foundations for the study, but the necessary changes due to contextual factors led to reconceptualization. Thus, the need for an overview of the developmental contextualist perspective that underpins the Vondracek et al., (1986) DCF of career development with a description of the framework as well as the LSVD (Vondracek et al., 2014) focus on vocational behaviour and development across the life-span.

Overview of career development theories

Career counselling's initial focus was primarily on the use of assessment techniques for job placement. Beginning in the early 1950's, career counselling started to expand its boundaries by including a broader range of factors in the career choice process, such as self-concept, self-knowledge and various developmental factors. The conceptual shift in career counselling, test format, work satisfaction studies, and classification systems of occupations have evolved primarily from theories. A theory presents some guidance about what is most important to study, how it should be studied, and how the results will address counselling concerns (Zunker, 2012).

Career theories provide a framework within which we can understand and hypothesise about career behaviour and choice. Theory thus provides career counsellors with the means to identify, interpret and assist clients in their career goals. Career theory assists in facilitating predictions of career behaviour and what may impact future career choices; it enables researchers and practitioners to investigate and explore the career choices and development of individuals. Understanding theory serves as a guideline for practitioners not only to assist individuals in making career choices but also to design career counselling programmes and assessment instruments. Linked to this, career theories should be clear about the terms, constructs and theoretical framework they describe. Career theories should acknowledge the parameters within which their formulations are mapped and should provide measurable constructs that can be researched and consistent in what they describe (Brown, 2002; Watson & Stead, 2006).

The historical development of career theories reflects the times in which they were constructed. Within changing times and populations, some theorists have become trapped by

their definitions, some have continued to evolve, others have been superseded, with their theoretical tenets being incorporated into frameworks for newer theoretical development; whilst others have re-examined their foundation and acknowledge the role that changing environments play in individuals' career development. Thus, the changing nature of career theories is a natural consequence of the changing nature of work (Watson & Stead, 2006).

Trait-and-factor theory

Trait-and-factor theory has been in existence and has survived because it emphasises the core content that career education needs to accommodate. Trait-and-factor theory matches the traits (individual characteristics) with the demands and requirements of the work environment (factors), which influence career decision behaviour, and this remains critical to all career theories (Watson & Stead, 2006). Parsons (1909), who established trait-and-factor theory for career counselling, maintained that career guidance is accomplished first, by studying the individual's attitudes, abilities, interests, and ambitions; thus, defining the characteristics (traits) of the individual who is making a career choice. Secondly, a survey of occupations is needed, with the individual acquiring knowledge of the requirements, advantages and disadvantages of the differential nature of work (factors). Thirdly, it requires the matching of the differential characteristics of the individual with the differential requirements of the work. The better the relationship between these traits and factors, the better the match or fit should be (Watson & Stead, 2006).

Trait-and-factor theory became the foundation for many career counselling programmes in the 20th century and evolved from early studies of individual differences that developed in alignment with psychometric movements. This theory greatly influenced the study of job descriptions and occupational requirements, as theorists attempted to predict future job success by measuring job-related traits (Zunker, 2012). Thus, the development of assessment instruments and the refinement of occupational information are closely associated. The key assumption is that individuals have unique patterns of ability and traits that can be measured objectively and correlated with the requirements of various jobs. Therefore Trait-and-factor theory is a typological-interactive theory that defines personality types and environmental models, exploring the "fit" between persons and environments (Nel, 2006).

Williamson's (1939) counselling procedures maintained the early impetus of the trait-and-factor approach that evolved from Parsons's (1909) work. He viewed counselling as facilitating self-understanding, realistic planning and decision-making skills (Chartrand, 1991). He described counselling as a six-step process that included analysis, synthesis, diagnosis, prognosis, counselling and follow-up (Chartrand, 1991; Zunker, 2012). The first steps involved gathering actuarial and clinical information, synthesising the information to determine the

client's strengths and weaknesses, and drawing inferences based on the client's strengths and weaknesses. A diagnosis was based on both the nature and cause of the reported problem. To assist in the diagnosis of career-related concerns, Williamson (1939) proposed and defined four supporting categories of career problems clients may experience, namely (1) no career choice, (2) uncertain career choice, (3) unwise career choice, and (4) discrepancy between interests and aptitudes. Individuals experience the crisis of no career choice when they are unable to select a specific career path or have no awareness of their career interests. An uncertain career choice is experienced when individuals have selected an occupation, but are hesitant regarding their choice. An unwise choice is when there is a lack of agreement between the client's interests, capabilities or aptitudes and the requirements of an occupational environment. This usually denotes a career choice for which the individual has limited aptitude (Crites, 1981). A discrepancy between interests and aptitudes refers to incongruence between a client's occupational interests, abilities and personality (Williamson, 1939). Through the process of diagnosis, the practitioner obtains important information related to the client's career concerns, forming the foundation on which to select appropriate psychometric assessments (Zunker, 2012). This information, in conjunction with an evaluation of the client's background, guides practitioners in selecting applicable psychometric assessment instruments to provide clients with valuable information to resolve their career indecision (Morgan, 2014). Here, the practitioner selects a variety of psychometric instruments to measure the client's career interests and values, personality characteristics and aptitude (De Bruin & De Bruin, 2013).

A prognosis is made based on estimating the probability of client adjustment under different conditions or choice options. This is followed by problem-solving counselling that may include follow-up after the client had made a career decision (Brown, 1990; Chartrand, 1991). This process includes recommendations that provide clients with possible solutions to their career-related concerns and enables them to explore these solutions in the reality of the world of work. When integrated into other theories of career counselling, the trait-and-factor approach plays a vital role in the development of assessment techniques whose results are used with other data to indicate congruence between individuals and work environments (Zunker, 2012).

Standardised assessment and occupational analysis procedures stressed in trait-and-factor approaches are useful in career counselling (Zunker, 2012). A study by Atli (2016) conducted with 57 students in Malatya city centre high schools in Turkey on the effect of career counselling sessions on career adaptability and career indecision level of high school students, demonstrated that trait-factor theory-based career counselling sessions were effective in improving the career adaptability levels of the students, while lowering their career indecisiveness. The study reports that trait-factor-based career counselling increased the self-

awareness of high school students, who are at a critical juncture in making a career decision. It further highlights that trait-factor based career counselling is practical for its brevity and efficiency, especially when the limited number of school psychologists compared to student needs is considered. Moreover, the study highlights one of the trait-factor counselling outcomes: learning effective decision-making skills (Chartrand, 1991).

Critique of the trait-and-factor approach

The trait-factor approach is too narrow to be considered a dominant career theory (Zunker, 2012). A key critique of this approach is its equivalence to the medical model, where too much emphasis is placed on the practitioner's expertise and ability to diagnose the client's career problems and provide a prognosis for future occupational adjustments. Trait-and-factor career counselling is primarily atheoretical since the focus tends to be on empirical observations and data collection (Crites, 1981).

Certain assumptions of the trait-and-factor approach to career counselling have raised specific concerns (Zunker, 2012). It assumes that the career decision-making process is universally satisfying; that individuals make a career choice only once; that there is a single career choice for every individual and that there is a single type of person who works in each occupation (Watson & Stead, 2013). This approach also assumes that career decision-making is based on measured abilities, which implies that psychometric instruments are sufficiently reliable and constant over time (Watson & Stead, 2013). Furthermore, this approach draws from a Eurocentric career psychology worldview that exemplifies values of autonomy and individualism; and assumes free choice and equal access to training and work opportunities. The assumption is that for career choice to occur, individuals must possess alternative career options to choose from and that the individual must have the freedom to choose. These central assumptions have been largely nullified in the lives of many South Africans (Naidoo et al., 2017). There is therefore a need for South African career counsellors to research the local efficacy of trait-factor theory, and all career theories to assess the applicability of their future use in this country (Watson & Stead, 2013).

Despite the criticisms of the trait-and-factor approach, it has provided a foundation for the development of several other career theories and remains the cornerstone of most developmental career theories (Brown, 2002; Watson & Stead, 2013). This approach highlights the practicality of standardised assessments and occupational analyses, which continue to be employed in contemporary career counselling practices (Zunker, 2012), including online applications. Trait-factor counselling has never been solely dependent on testing, nor was testing used simply to "tell" the client what they should study (Chartrand, 1991). It has been argued that Parsons' (1909) first step emphasised evaluating each

individual as an important part of the counselling paradigm and does not necessarily include psychometric data. The major point here is that clients can benefit from dialogue that is directed towards personal traits and how changes might affect career decision-making (Zunker, 2012).

Holland's (1985) hexagon theory

Holland's (1985) hexagon theory of career personalities is one of the most influential theories in the field (Morgan et al., 2015a), developing from the original trait-factor model (Watson & Stead, 2006). The six typological models posited by Holland (1997) are characterised by a composition of interests, preferred activities, beliefs, abilities, and values and preferences exhibited by individuals (Nauta, 2010; Nel, 2006). Numerous interest inventories are based on Holland's model that proposed that most people resemble a combination of six career personalities and corresponding environment types: Realistic, Investigative, Artistic, Social, Enterprising and conventional (RIASEC) (Morgan et al., 2015a). A Holland code (typically the first letter of the three RIASEC types that the person resembles) can be generated on the basis of assessments, although Holland (1997) recommended using the rank ordering of all six types to describe individuals. Likewise, work environments can be categorised by their resemblance to a combination of the RIASEC types (Nauta, 2010). A key concept is that individuals are attracted to the role demands of an occupational environment that meets their personal needs and provides satisfaction (Zunker, 2012). Research suggests that congruence between personality type and the environment leads to favourable outcomes (Morgan et al., 2015a).

Both career and non-career behaviour result from the interaction between a person's specific personality pattern and the environment in which they function (Holland, 1997). The predictability of behaviour depends on several secondary assumptions, namely calculus, consistency, differentiation, congruence and identity (Nel, 2006). In the first, *calculus*, Holland (1997) postulated that the six personality and environment types can be geometrically arranged in a single hexagonal model. The model will always appear more or less in the same format, and the distance between the types will remain more or less the same (Nel, 2006). Therefore, the theoretical relationship between types of occupational environments lends itself to empirical research techniques (Zunker, 2012).

Consistency is an expression of the degree of correspondence between the personality or environment types. The more consistent a person's profile, the more predictable their choice of career will be (Nel, 2006). The third concept is *differentiation*. Some individuals or environments show a greater correspondence with a pure RIASEC type (Nel, 2006), illustrating the differences from the other types. When an individual or environment has a close resemblance to a specific RIASEC type, they are regarded as well-differentiated. This reflects greater clarity with respect to making a career choice (Nauta, 2010).

Congruence refers to the degree of correspondence between the personality type and the environment type. Individuals tend to do best in those environments that correspond most closely with their personalities, since such environments offer meaningful compensation and best fulfil their needs (Holland, 1997; Nel, 2006). Lastly, *Identity* refers to the degree to which an individual has a clear picture of their goals, interests and talents (Holland, 1997). Similarly, applied to a career environment, an identity reflects the degree to which a work setting has clear goals, tasks, and rewards that remain stable over time (Nauta, 2010; Nel, 2006). Consistent and well-differentiated individuals should have more crystallized career identities and, as a result, are expected to make career choices with less difficulty and to move on to do competent work, be satisfied and personally effective and engage in appropriate social and educational behaviour (Holland, 1997; Nauta, 2010). Likewise, environments characterised by a high degree of consistency and differentiation and that engender clear identity are expected to have employees with higher levels of satisfaction, stability and productivity (Nauta, 2010).

Holland (1997) therefore stressed the importance of self-knowledge as well as occupational knowledge in the search for career satisfaction and stability (Zunker, 2012). In career counselling, potential choices are provided to people based on their personality types and the characteristic environments of particular jobs (Morgan et al., 2015a).

South African applications of the hexagon model

The Self-Directed Search (SDS) (Gevers et al., 1997) and the South African Vocational Interest Inventory (SAVII) (Du Toit et al., 1993) are the most widely used interest inventories in SA, based on Holland's (1997) hexagonal theory of vocation personality types (Morgan et al., 2014). However, these inventories are outdated in content, have limited evidence of reliability and validity across diverse demographic groups and research has provided limited support for the structural validity of Holland's hexagonal model (Du Toit & De Bruin, 2002; Watson et al., 2007; Morgan et al., 2014). Career interest inventories, based on Holland's theory, have also been criticised on the basis of their content not being representative of occupational developments (Rabie, 2017), which have resulted from global changes in the economy and world of work (Maree, 2010b).

In response to such criticisms, Morgan et al. (2015a) recently constructed and assessed a new interest inventory for the South African population, namely the South African Career Interest Inventory (SACII) (Rabie, 2017). Morgan et al. (2014) investigated the validity of Holland's hexagonal structure with adolescents and young adults from three Higher Education (HE) institutions in Gauteng and KwaZulu-Natal provinces, through the use of the SACII and

found a satisfactory fit for Holland's hexagon model when applied to Black, Coloured, Indian/Asian and White university students. The study also examined the career interests of working adults. The result of the study indicated that Holland's hexagon model may actually be applicable to the South African context and that career assessment and counselling based on the model may proceed if valid interest inventories are used. It is therefore possible that cross-cultural research that fails to establish the validity of Holland's structural model might benefit from having items developed that are particular to that country, rather than imported inventories and standardising them (Einarsdottir et al., 2010).

In addition, Morgan et al. (2015b) investigated gender differences related to Holland's hexagon structure in South Africa through the use of the SACII on a diverse sample of young adolescents, adults and working adults, and found a satisfactory fit for Holland's model across genders. This research provided support for the equal application of the model for both men and women. Although the above evidence is promising, it is recognised that much research is still required to make the SACII a viable instrument for the assessment of career interests in South Africa (Morgan et al., 2014).

A recent study by Rabie (2017) has taken further steps to refine the SACII by translating the SACII into isiXhosa, thereby constructing the first career interest inventory in a South African indigenous language. The results for the study provided support for the reliability and validity of the SACII across different racial and language groups in South Africa. The study suggested that practitioners may continue to use Holland's (1997) model in career assessment and counselling in the SA context when a valid career interest inventory, such as the SACII, is employed. The study to be described later in this thesis aimed to contribute to further reliability and validity of the SACII in a SA university context, where the researcher used the SACII as part of the assessment battery to assist first-year university students seeking career counselling at the university career centre.

The person-environment fit approach

Person-environment fit theory enhanced the potential for working towards a closer relationship between assessment and career counselling (Prediger, 1995). The person-environment fit model still draws primarily from differential rather than developmental psychology, and still acknowledges the use of traits to predict occupational behaviour (Brown, 1990; Chartrand, 1991). The person-environment fit model extends beyond the assessment of individual abilities and work factors (as proposed by Holland's model) and captures the dynamic nature of the interactions between person and environment. The guiding questions (Chartrand, 1991) have become: what kind of personal and environmental factors are salient in predicting career

choice and adjustment; and how are the processes of the person and environment interaction characterised?

There are three basic assumptions that have been drawn from the trait-factor to apply to the person-environment fit approach. First, people are viewed as capable of making rational decisions with the assistance of counselling: here, counselling is embodied as a cognitive approach that emphasises the learning process (Chartrand, 1991). Secondly, people and work environments differ in reliable, meaningful and consistent ways. This implies that important patterns can be identified and used to organise both people and environments. This assumption provides the rationale for differential assessment across person and environment dimensions. Thirdly, the greater the congruence between personal characteristics and job requirements, the greater the likelihood of success (Holland, 1985). Moreover, the person-environment fit approach moves beyond congruence, to include the notion of reciprocity (Rounds & Tracy, 1990). Person-environment fit is a reciprocal process with individuals shaping the environment and the environment influencing the individuals, where the individual seeks out and creates environments that allow them to express preferred characteristics (Holland, 1985). What is more, the person-environment fit theory explicitly assumes that people and environments change continually in an ongoing adjustment (Chartrand, 1991).

According to Rounds and Tracy (1990), the primary goal of person-environment fit counselling is to facilitate career decision-making, planning, and adjusting through the acquisition of problem-solving skills. Clients move from acquiring and compiling information to integrating that information in a systematic way. Within the person-environment fit approach, psychometric information is one way of organising self-reported information and can be used to help clients develop a cognitive structure of themselves and their work environments; psychometric instruments are best used within the career counselling context. The value of using such tools does not nullify the necessity of putting the information into context (Chartrand, 1991).

Person-environment-correspondence theory (PEC)

More recently, the P-E fit model has evolved into the Person-Environment-Correspondence (PEC) model (Dawis, 2002; Lofquist & Dawis, 1991; Zunker, 2012). PEC theory postulate that individuals seek to achieve and maintain a positive relationship with their work environments. According to Lofquist & Dawis (1991), individuals bring their personal requirements to a work environment, and the work environment makes its requirements of individuals. To survive, the individual and the work environment must achieve some degree of congruence or correspondence (Zunker, 2014). To achieve this, the individual should successfully meet the job requirements, and the work environment must fulfil the individual's requirements.

This process of achieving and maintaining correspondence with a work environment is referred to as work adjustment. The theory highlights four key points, (1) work personality and work environments should be amenable, (2) individual needs are most important in determining an individual's fit into the work environment, (3) individual needs and the responsive or reinforcing system that characterises work setting are important aspects of stability, and (4) job placement is best accomplished through a match of worker traits with the requirements of the work environment (Lofquist & Dawis, 1991).

Individuals seek counselling when they are unable to satisfy their needs in a given environment and this may be conceptualised as P-E dis-correspondence. This dis- correspondence typically falls into two broad categories: (1) the client's inability to meet environmental response requirements and (2) the client's inability to find environmental reinforcers to satisfy their needs. PEC views counselling as a problem-solving process that focuses on the accuracy of client perceptions, appropriateness of client choices, and effectiveness of the client's actions (Eggerth, 2008). PEC theory depends heavily on client assessment, since its major objective is to identify groups of occupations that hold the greatest potential for a client's satisfaction in a work environment; and similarly, to identify those that will be less likely to meet the criteria for satisfaction. The major concern in this approach then, is a client's abilities (work skills) and (work needs) (Zunker, 2014). PEC empowers clients to be active agents in solving the difficulties facing them. PEC teaches clients a robust and flexible problem-solving approach that is applicable not only to the presenting problem but to other problems experienced long after the end of counselling (Eggerth, 2008).

The person-environment fit approach to career counselling and assessment

Psychometric assessment from a person-environment fit perspective can be useful if the tests and questionnaires used in the assessment provide reliable and valid scores. From a South African perspective though, it is important to emphasise that due to the differences in language, socioeconomic status, beliefs, and educational background, measures developed for one group cannot readily be used with other groups. Test developers have to demonstrate that the measure taps the same characteristics for different groups and should develop new measures that test the same characteristics for different groups (De Bruin & De Bruin, 2017).

It is common practice for psychologists to use assessment measures developed in one culture and to translate these for use in another culture and to make cross-cultural comparisons. One important precondition for cross-cultural comparisons using structural assessment measures such as personality and interest, is that the construct being measured should have the same meaning in the two cultures, hence assessment instruments can often be said to be biased (De Bruin & Taylor, 2017). Developing measures that are appropriate for the multicultural,

multilingual South African society, and that comply with the Employment Equity Act, is a difficult task. Proper test usage assumes the availability of adequate instruments in diverse societies. Special attention needs to be given to standards put forward when testing individuals of diverse backgrounds (Meiring et al., 2006).

The assessment domains of the person-environment fit approach

The section below highlights the person-environment fit approach as often applied in South African career assessments, by discussing several domains that form part of the assessment from a person-environment-fit approach: namely, the assessment of intelligence, aptitude, interest, values and personality (De Bruin & De Bruin, 2017). The following section will also discuss the career assessment measures used in this study.

People's career choices influence every aspect of their lives, including their financial position, lifestyle and their sense of self. Every effort should therefore be made to determine and assess those factors that best predict career success, such as interests and abilities, the two dimensions most often associated with career counselling assessment (Maree & Taylor, 2016) and explored first below.

Assessing intelligence

Cognitive tests have a long history of use in the education and work context for screening and selection purposes. The reason for their inclusion is that they consistently show statistically and significant relationships with work performance and educational environment. An intelligence score is a theoretical concept and cannot reflect intelligence in its diversity. The way in which intelligence is defined will determine the type of tasks included in a measure, which should be taken into account in the interpretation of the score obtained (Van Eeden & De Beer, 2017). Goleman (1995) challenged the narrow view of intelligence (as represented in many measures) and argues that aspects such as self-control, persistence, the ability to motivate oneself, are important factors determining success in life. The social or contextual view of intelligence defines the construct of intelligence in terms of adaptive behaviour and argues that we must define intelligent behaviour within the particular context where we find it (Van Eeden & De Beer, 2017).

General intellectual ability

Certain areas of functioning relevant to guidance in educational and occupational contexts are not covered by measures of general cognitive functioning (e.g. mechanical and clerical skills). The term aptitude is used to describe a specific ability (Van Eeden & De Beer, 2017). It refers to the individual's ability to acquire, with training, a specific skill or to attain a specific level of

performance. Different aptitudes and aptitude fields are important for success in different occupations. Tests of specific abilities are used in combination to assess the specific abilities relevant to the job. The aptitude profile from the aptitude tests and multiple-aptitude batteries identifies an individual's strengths and weaknesses. The aptitude profile together with other tests and academic performance can give guidance on decisions regarding, secondary education, subject choice, level of subject choice and field of study after school. A combination of aptitudes is considered when making these decisions and conclusions are not based on single scores (Van Eeden & De Beer, 2017).

Both individual and group intelligence measures can be useful in the career counselling context (Van Eeden & De Beer, 2017). Group measures of general ability give an indication of the individual's level of reasoning ability or problem-solving ability where an individual's performance can be compared with that of a reference group (norm group). The information is relevant to an individual's academic achievement and can be used for educational counselling, selection and placement of students in tertiary institutions (Van Eeden & De Beer, 2017).

Career counsellors use measures of specific abilities or aptitudes to try and match clients with specific occupations. Different occupations require different skills (De Bruin & De Bruin, 2017). Aptitude test scores provide an index of measured skills that are intended to predict how well an individual will perform on a job or in an educational/training programme (Zunker, 2006).

A person's educational and occupational achievements are likely to be limited by opportunities they have had and may not reflect their true potential (Psychtech International, 1991). When aptitude profiles are compared, it is assumed that everyone being assessed has more or less the same level of experience with regard to the different aptitudes. This is not necessarily true in a context where people's backgrounds are likely to be dissimilar. The composition of norm groups with regard to language and culture should always be taken into account when interpreting results (Van Eeden & De Beer, 2017). Reasoning tests enable us to avoid many of these problems. Reasoning tests provide reliable, standardised ways to assess an individual's ability to use logic and solve complex problems. Not only do they prove an objective measure of a person's ability, but also assess the individual's potential, and not just their achievement. As such, reasoning tests have a significant role to play in many selection decisions (Psychtech International, 2006).

The Psytech (2007) batteries available in South Africa for career assessments correspond to what is known as multiple-aptitude batteries, consisting of a number of homogeneous tests, each measuring a specific ability. The Psytech batteries are designed based upon a recommended minimum level of education (Van Eeden & De Beer, 2017). In order to

accurately assess reasoning ability, it is necessary to use tests which has been specifically designed to measure the ability being assessed in the population on which the test is intended to be used (Psychtech International, 2006). The General Reasoning Test (GRT2) used in this study, is designed specifically to assess applicants for roles that require a general reasoning ability. The three aptitude domains that are most consistently correlated with general reasoning ability are verbal, numerical and abstract reasoning ability (Heim, 1970). Consequently, the GRT2 was specifically developed to assess these domains of ability and comprises three subtests.

Interest Inventories

The assessment of career interests is a central part of the practice of career counselling. Using interest inventories, practitioners are provided with the necessary information to reveal individual interests, competencies and career preferences (Harrington & Long, 2013). Contextualisation sets interests apart from other individual difference variables such as cognitive ability and personality traits. Interest directly captures the relationship or the fit between a person and certain types of environments. Interest affects the direction, vigour, and persistence of goal-oriented behaviour; therefore, it is expected that interests will predict goal attainment in educational and work settings. Interests are viewed as relatively stable dispositions that facilitate fit (congruence) between people and their environments. The appropriateness of using interest assessments for academic or career guidance and prediction assumes stability. Interest inventories help individuals make evidence-based decisions about educational and occupational opportunities (Rounds & Su, 2014).

Scores on an interest inventory reflect an individual's preference for engaging in specific occupations (De Bruin & De Bruin, 2017). MacAleese (1984) identified three general purposes of interest inventories in career counselling namely, to identify interests which the client was not aware of, to confirm the client's stated interest and to identify discrepancies between the client's abilities and interests.

As stated before, the Self-Directed Search Inventory (SDS) and the South African Vocational Interest Inventory (SAVII) are the most widely used interest inventories in South Africa based on Holland's (1997) hexagonal theory of vocation personality types (Morgan et al., 2014). The investigation of the hexagonal model in South Africa was conducted by du Toit and de Bruin (2002) among rural men and women of the Eastern Cape and North–West provinces. An unsatisfactory fit was found for both studies and the potential reasons proposed were the cultural differences between the Western context and South African context (individualism vs. collectivism), as well as poverty and language barriers (Du Toit & De Bruin, 2002). As a result of the research cited earlier under the description of the hexagonal model (e.g., Rabie, 2017),

this study will employ the South African Career Interest Inventory (SACII), an emic and more recent South African interest inventory designed to measure Holland's six vocational personality types (Morgan et al., 2014), with improved wording and norms.

Assessment of values

A well-known approach to values assessment within the work domain is the Theory of Work Adjustment (Dawis & Lofquist, 1984). Within this theory, individuals develop needs, which are basic requirements that may be satisfied through reinforcement from the work environment. Values are reference dimensions for needs. According to the theory, individuals will have the greatest satisfaction in those work environments that reinforce their values (Dobson et al., 2014).

Zunker (2006) emphasised the importance of value clarification in career assessments. Some people like to work because they enjoy the need satisfaction derived from working; others work to earn money to spend on activities other than work. Knowledge of these work values and needs is important to the counsellor and client in order to understand the underlying reasons for job satisfaction or dissatisfaction (Langley et al., 1992).

The Value scale (Langley et al., 1992) may be used to assess the relative importance that an individual places on activities. The purpose of the Value Scale is to assist an individual by means of guidance to become aware of the need satisfaction they consider important for work satisfaction. The Value Scale was standardised for English, Afrikaans and African language groups in South Africa (De Bruin & De Bruin, 2017). Values make an important contribution to career exploration, decision making, and satisfaction and should therefore be included in the counselling process (Dobson et al., 2014).

The Value and Motives Inventory (VMI) is the Psytech (2007) derivative of this reliable and comprehensive assessment of personal values and motives. It profiles a person's motivations to determine the amount of energy and effort they are likely to expend on different activities. The VMI measures occupationally relevant values under three main categories: interpersonal values, which influence an individual's approach to relationships with others; intrinsic values, relating to personal beliefs and attitudes which guide an individual's approach to everyday problems; and extrinsic values, which influence behaviour in the workplace. The VMI provides descriptions of the respondent's interpersonal, extrinsic and intrinsic values, also summarising the possible motivating and demotivating factors (Psytech, 2007).

Assessment of personality

The assessment of personality is another important component of career counselling from a person-environment fit perspective. The aim of personality assessment is to identify an individual's salient personality characteristics to the requirements of occupations (De Bruin & De Bruin, 2017). Holland's (1985) hexagon theory of career personalities is one of the most influential (Morgan et al., 2015a), developed from the original trait-factor model (Watson & Stead, 2006) and described earlier in the chapter. A person's career choice is seen as an expression of their personality (Holland, 1997). Research suggests that congruence between personality type and the environment leads to favourable outcomes (Morgan et al., 2015a). Holland, therefore, stressed the importance of self-knowledge in the search for career satisfaction and stability (Zunker, 2012). In career counselling, potential choices are provided to people based on their personality types and the characteristic environments that have been identified of particular jobs (Morgan et al., 2015a).

The Jung Personality Questionnaire (JPQ) is based on Jung's theory of personality type (Du Toit, 1983), identifying how people's preferences influence ways of relating to the world and other people. It is a criterion-referenced personality measure for adolescents. In South Africa, the test was adapted for the use of white English and Afrikaans-speaking adolescents and is used for career advising and counselling purposes (De Bruin & Taylor, 2017). There is limited research on the cross-cultural use of the JPQ in South Africa. Research is urgently needed to update and establish the psychometric properties of the JPQ for all South African cultural and language groups (De Bruin & Taylor, 2017).

The Jung Type Indicator (JTI) is the Psytech (2007) derivative of the above measure. The JTI questionnaire assesses a person's preferences along the four dimensions of Extraversion-Introversion, Sensing-Intuition, Thinking-Feeling and Judging-Perception. From knowing these preferences, it is possible to anticipate how a person will generally prefer to act in a variety of situations. It is also possible to anticipate how a person will typically prefer to approach many aspects of their work. The JTI can provide useful insights for personal development, counselling and guidance (Psytech, 2007).

Relevance of assessment in South African context

Utilising and adapting theories, constructs, counselling techniques and instruments from other countries can be beneficial in South African context. Western approaches should therefore not be dismissed out of hand (Stead & Watson, 2017). De Bruin and De Bruin (2006) warn against stereotypical perceptions of standardised career test usage in South Africa: their helpfulness depend on the use to which the tests are put and the manner in which these are done, analysed and interpreted.

Psychometrically sound assessment instruments in career psychology are crucial. In principle, well-designed instruments could guide career development into directions that would facilitate individuals' optimal use of their strengths and talents. They could facilitate the exploration of career interests and work values as well as the acquisition of sound decision-making skills, which could be helpful to individuals' time. There is a distinct danger when career counsellors rely extensively on the various measurement instruments and neglect properly contextualizing a client's problems and issues. Proper contextualisation, from the perspective of life-span based, developmental career psychology means viewing career development issues from the perspective of the whole person who is developing within multiple, interconnected contexts (e.g., Bronfenbrenner, 1979). Moreover, the separation of career issues and tasks from other domains of functioning and development might lead to counterproductive interventions (Vondracek, 2001). Therefore, whether these tests have been useful would depend on how they have been incorporated, with the counselling process in which career assessment is embedded warranting consideration (McMahon & Watson, 2015).

This above critique highlights the gradual recognition that unquestioning acceptance of, and subscription to predominantly Western, Eurocentric theoretical models and paradigms is not suitable for South Africa. South Africa with its diverse population provides a unique context for the development of indigenous knowledge, and this needs to be extended to the field of psychological assessment (Laher & Cockcroft, 2014). It is important for career professionals to develop and employ theories, models and techniques that originate in Africa. However, contextually appropriate knowledge is not generated merely by having South African samples, but by devising new theories, constructing and career interventions or by determining the meaning of existing approaches in South African context (Stead & Watson, 2017). This research hopes to build upon the aforementioned by evaluating existing approaches in SA; and then to consider the application of career counselling specifically at a SA University.

Evaluation of the Person-Environment fit approach

The person-environment approach rests on the assumption that, if individuals know themselves and the world of work, they should be able to make satisfying career choices by selecting a work environment that match their abilities, interests and personalities (De Bruin & De Bruin, 2017; Sharf, 2006). This approach however does not take into consideration that individuals may be differentially ready to make career choices. Some individuals can benefit from self-exploration and can readily integrate information about the world of work, whilst others are not yet ready to usefully implement such information. The person-environment fit approach also assumes that people are free to choose from a variety available career options. However, in many developing countries such as South Africa, job opportunities are scarce and

few individuals have the privilege to choose a career from the various options, where the majority may be forced to take any career opportunity that may come their way (De Bruin & De Bruin, 2017). Criticism of traditional theories of career development is that they do not consider the various contextual influences of career choice and decision making (Mkhize & Frizelle, 2000; Patton & McMahon, 2006). Contextual factors that influence the career development of many South Africans include the lack of career education and information in education settings, economic constraints and an unstable economic and working environment (Akhurst & Mkhize, 2006). It is therefore important that concepts such as career decision making and career choice, are considered against the backdrop of South Africa's socio-political history, socio-economic and socio-cultural environment (Watson, 2009).

Despite the above critique, the person-environment fit approach has been a dominant approach in career counselling and several psychometric inventories have been developed specifically for career counselling.

The Developmental approach to career counselling and assessment

During the 1950s, Donald Super introduced the concept career adaptability and placed emphasis on career decision-making within the context of human development (Crites, 1981). Career choice is viewed as a developmental process, with career development being argued to be a life-long process; that is, the individual's career self-concept changes constantly through the achievement of sequential developmental tasks, over the course of life stages (Super, 1990). A central concept of this theory was that of career adaptability which denoted the readiness to make career decisions and cope with the tasks of each life stage (Super, 2013). Career adaptability referred to the degree to which individuals mastered the career development tasks appropriate to particular developmental stage (Super, 1983). This readiness requires that individuals complete five developmental tasks namely, to gain appropriate knowledge of self, demonstrate effective decision-making skills, gain appropriate knowledge of careers, be able to integrate the knowledge of self and careers and be able to plan for a career (Watson & Stead, 2017).

Langley et al. (1992) have developed the Career Development Questionnaire for use in South Africa based on the above developmental tasks. Langley (1990) emphasised that the career counsellor should not only assess whether the client knows themselves and the world of work, but should also assess whether the individual is able to integrate this material in a meaningful way (De Bruin et al., 2013).

Stead and Watson (1998) recommend that constructs such as developmental stages, self-concept, career adaptability and decision-making require a re-examination or to be redefined

indigenously when utilised in the SA context. Career researchers and practitioners need to constantly adapt their understanding of career readiness in order to attuned with the realities of the contexts within which their clients and research participants career development occurs. Career adaptability as a concept has been criticized both for the seemingly negative connotations related to “maturity” and for its failure to consider an individual’s context. The relevance of Super’s developmental stages, as well as the constructs of self-concept development and career adaptability, have been questioned against the context of normative historical factors (*viz.*, the impacts of apartheid) and non-normative factors (such as poor economic conditions) (Watson & Stead, 2017).

Studies documenting within-group developmental trends, rather than comparative studies are encouraged. In this way, one might determine what the developmental trends are, rather than relying on theoretical statements (Watson & Stead, 2017). This study aims to build on the aforementioned by looking at first year students’ career trajectories over the course of their undergraduate studies, to strive to identify what factors impact upon and influence students’ career development.

Over the past decade or so, career development theory and career counselling practices have begun to move from a predominantly quantitative (positivist) approach to an acknowledgement of the value of qualitative approaches (Maree, 2010b). It has been proposed that triangulating and crystallizing assessment results, as a means of ensuring greater reliability, can best be achieved by using a combination of quantitative and qualitative assessment techniques. Such a combination of techniques demonstrate how contemporary theories and goals in career counselling can be merged to provide a viable framework for the interpretation, explanation, and directing of career-related behaviour (Maree, 2013). Constructivist career theory (to be explored further below) has influenced career counsellors to adopt qualitative methods of career assessment in addition to, or as alternative to standardised psychological testing (De Bruin, 2013).

Career construction theory and life-design counselling

To better assist clients in designing their lives for the 21st century, many career counsellors now concentrate on identity rather than personality, adaptability rather than maturity, intentionality rather than decidedness, and stories rather than scores (Savickas, 2012). The constructs of identity, adaptability, intentionality, and narratability contribute to the formulation of career construction theory (Savickas, 2005). In relation to career development, constructionist perspective highlights flexibility, employability, commitment, emotional intelligence, and lifelong learning (Savickas, 2012).

Career construction comprises both a theory of vocational behaviour and a system of career counselling with social constructionism as its base (Hartung & Vess, 2016). Career construction theory incorporates and builds upon person-environment fit emphasising traits, lifespan development emphasising developmental tasks, but then including narratives that emphasize life themes to comprehend career as a story (Savickas, 2011). The theory and practice consider the traits evident in a person, how individuals adapt to transitions over the life course, changes influenced by personal and environmental conditions, and why a person behaves and moves in a particular life direction (Savickas, 2005).

One somewhat relatively unrecognized problem in research is the issue of when, in the course of the life-span, career psychology is relevant and when career counsellors should best intervene. Unfortunately, this problem has not received the attention it deserves in career psychology. Both research and intervention in career psychology tend to be concentrated in high school and universities. Early career education, career guidance at other times in schools, career counselling throughout one's work life, and retirement and postretirement counselling should all be considered within the domain of life-span career psychology (Vondracek, 2001).

Career constructivism suggests that individuals construct their own reality and truth. Careers are to be viewed from developmental contextual viewpoint that focus on one's adaptation to an environment through the development of inner structures (Zunker, 2012). The theory identifies four basic dimensions of career adaptability that indicate developmental lines wherein individuals must establish a foundation of (1) concern about the future, (2) control over their lives, (3) curiosity about occupational careers, and (4) confidence to construct a future and deal with career barriers (Savickas, 2013). Career construction counselling aims to increase an individual's level of career adaptability so that they can more effectively produce their own development in the face of changing opportunities and constraints (Savickas, 2002). Clients need to learn how to construct a career path that fosters individual progress to discovering and experiencing a meaningful life (Zunker, 2012).

The story or life-theme segment of career construction deals with the individual's endeavour to implement his or her self-concept in work. In constructing a career, an individual engages in an on-going process of adaptation to enhance the match between self and situation and better realize his or her self-concept in work. Counselling emphasises identifying life themes because they indicate what gives life purpose, meaning, direction, and coherence (Hartung & Taber, 2008; Hartung & Vess, 2016). Career construction, at any given stage, can be fostered by conversations that explain career development tasks, exercises that strengthen adaptive fitness and activities that clarify and validate career self-concepts (Savickas, 2002).

The Life-design paradigm

The Life-design paradigm and its practical use, amplify person-environment fit and integrate developmental career models and methods by offering career development practitioners and researchers a contextualised approach and lifelong, holistic, contextual, and preventive counselling intervention framework that aims to increase (1) activity to shape interests, capacities, and aspirations; (2) career adaptability to cope with changes in self and situation; (3) narratability to articulate a clear identity and coherent personal life/career story; and (4) intentionality to give meaning to activities and experiences related to life career (Hartung, 2016).

The life design model can be applied successfully in different contexts (developed and developing) and in different ways (individual and groups). It facilitates the use of postmodern techniques and is based on narrative approach and the use of stories. Career construction counselling embedded in the framework of life design that develops the broader landscape of counselling, empowerment and affirmation, appears to be useful in South African context (Maree, 2017a).

Assessment in career construction theory and life-design counselling is conducted by using such techniques as the Career Interest Profile (CIP; Maree, 2010). This is a qualitative tool that provides the counsellor with objective and subjective data that can be discussed with a client during counselling (De Bruin, 2013) and is widely used in the South African context.

The Career Interest Profile (CIP)

The CIP was developed by Maree (2007, 2010b). It is a qualitative tool that provides the counsellor with both objective and subjective data, a configuration of personal interrelated factors, which includes an individual's level of interest, career preferences and dislikes that provides the counsellor with objective and subjective data that can be discussed with the client during career counselling. The discussion should help the psychologists understand the reason why clients display specific career interest profiles, it should also help the client to understand their career interest profile and should motivate them to investigate the world of work (Maree, 2010b).

The CIP was designed to help clients narrate their career stories, thus enabling them to listen to, authorize and fine-tune their stories and become actively involved in the process of self and career construction (Fabio & Maree, 2013). The CIP aids discussion about choosing certain subjects, field of study and careers and has been designed for South African clients of all ages. The CIP also exemplifies the need for multiple approaches to collect data as a preliminary step in assisting clients to make appropriate career choices (Maree, 2010b). This

also highlights the focus of life narratives and contextual factors in career assessment, rather than relying solely on traditional testing (Laher & Cockcroft, 2014). The CIP formed part of the career assessment battery used in this study.

This chapter has presented an exploration of various career development theories, with particular reference to the South African context. The chapter began with an outline of the trait-and-factor and person-environment approaches to career assessment and counselling, discussing each theory as related to the South African context. The related topics and relevance of assessment in the South African context were discussed, followed by an outline of the developmental approach to career counselling and assessment, as well as a discussion of the career construction theory and life-design counselling.

This literature review provided the initial foundations for the study and was originally intended to provide a theoretical overview that would form the basis of a large quantitative study. The initial intent was to recruit and conduct career assessments on a large scale. However, due to difficulties in recruiting a large number of students to conduct career assessments during the initial data collection phase, further hindered by the impact of COVID-19, the decision was taken for the study to change direction towards multiple case studies, for more in-depth understanding of the students' career trajectories. This change led to reconceptualisation and necessitated the move towards gaining a broader systemic view. Thus, there was the need for an overview of the developmental-contextualist perspective that underpins the Vondracek et al. (1986) Developmental-Contextual Framework (DCF) of career development, as well as the Living Systems theory of Vocational Behaviour and Development (LSVD) (Vondracek et al., 2014), to be explored in the next chapter.

Chapter 3: Career theory and counselling practices for the SA context

Stead and Watson (2006) called for greater embedding of career theory and practice in the national context. They challenged career counselling theorists and practitioners to consider the applicability of career constructs in the context in which they work. This is to determine the applicability of career theory to diverse population groups (Maree, 2017a). This chapter presents a review of systemic career development theories, with particular reference to the SA context. The chapter begins with a discussion of Indigenous psychological approaches and is followed by an overview of Systems approaches to career counselling and assessment related to the SA context. Then, an overview of the developmental-contextualist perspective that underpins the Vondracek et al.'s (1986) DCF of career development is discussed, with a description thereof, followed by an exploration of the applications and relevance of this model in SA. Thereafter, the LSVD (Vondracek et al., 2014) is briefly described. The final section of this chapter entails an overview of relevant research literature related to career development in Higher Education (HE), with an emphasis on SA studies.

Indigenous psychological approaches

Most researchers in the field have responded to the call for relevancy by increasing the diversity of their samples, but this does not necessarily address the cultural context and the economic realities within which their participants live (Stead & Watson, 1998). One does not generate contextually appropriate knowledge merely by having SA samples but by devising new theories, constructs and career interventions, or by determining the meaning of existing approaches in the SA context (Stead & Watson, 2017). South African career researchers have been more inclined to impose questions that are largely derived from international theories and research. This gives participants little chance to expand on their views. In addition, not all psychological knowledge is easily translated into the SA context. It is important that career researchers and counsellors reflect on the needs and issues of different SA cultures.

It has been suggested that SA career researchers and career psychologists seriously consider employing an indigenous approach as a way of understanding career psychology within the SA context (Stead & Watson, 1998), by building up inductively from data gathered. Indigenous psychology emphasises the understandings people have of themselves and the world and is embedded in the ecological context (Kim & Berry, 1993). The indigenous psychology movement emphasises the importance of groups developing their own indigenous understandings. The purpose of the indigenous psychology approach is to determine psychological universals (Stead & Watson, 1998) and particularities.

The development of theories that reflect a particular context is an important aspect of indigenous psychologies. To remain consistent with the meaning of indigenisation, career theories and constructs from other countries need to be examined for their appropriateness in SA. Indigenous psychologies recognise both quantitative and qualitative research methods (Stead & Watson, 2017), emphasising the utilisation of appropriate methods to study the problem in question. The purpose of career psychology research in SA should not be to provide career phenomena that necessarily vary substantially from Euro-American perspectives of career development. Applying and adapting theories, counselling techniques and instruments from other countries can be beneficial in the SA context, these western approaches should therefore not be dismissed out of hand. Rather, efforts should be directed at providing informed descriptions of career development and career interventions in various contexts for the benefit of SA. Indigenisation of psychologies enables scholars to integrate into their work both traditional and imported psychological perspectives; to enable career psychologists to focus on issues that are important to their own contexts, while still being part of and contributing to the larger body of psychological knowledge.

Systems approaches to career counselling and assessment

Postmodern approaches include the Systems Theory Framework (STF) of Career Development (Patton & McMahon, 2006). The STF is grounded on principles of systems theory with strong links to the constructivist and social constructionist worldviews. STF is an overarching metatheoretical framework within which commonalities and relationships between career theories could be identified, by providing a comprehensive conceptualisation of the many existing theories and concepts relevant to understanding career development (Patton et al., 2017). It is not designed to be a theory of career development, it was developed to provide coherence to the career development field by providing a framework within which all concepts of career development, described in the plethora of career theories, might be usefully positioned and utilised in both theory and practice, and provide theoretical insight on career development (McMahon & Patton 2022; Patton et al., 2017).

By taking an individual-in-context perspective, the STF maps a range of intrapersonal and contextual influences in three dynamically interconnected systems, the individual system, the social system, and the environmental-societal system; in the context of past, present, and future time (McMahon & Patton, 2022). A significant feature of STF is its capacity to represent the dynamic nature of career development within and between systems through its inclusion of the process influences of recursiveness, change over time and chance (Patton et al., 2017). Recursiveness describes the recurring dynamic interaction within and between systems. Changes in one system will have an influence on and may lead to changes in another

subsystem. Time is represented in the STF as a circular depiction that emphasises the nonlinear nature of an individual's career development and influence of the past and present experiences on future opportunities and expectations. Given the complexity of influences depicted in the STF, an individual's career development is not likely to be planned, predictable or necessarily seeming logical.

Developmental career theories, such as that of Super (1990), depict career development as a series of successive stages through which individuals pass. The value of these theories cannot be underestimated, however there has been increasing recognition that such theories do not adequately account for the career development of all individuals; and that unexpected or chance events such as illness, accident or opportunity generated within the broader system but not anticipated by the individual may influence career development (Patton et al., 2017).

A strength of STF is that it highlights the complex web of relationships (Collin, 2006) that are influential. Together with systems thinking and systems mapping, STF has been applied in practitioner training, career counselling, qualitative career assessment, career education, research, and organizations (McMahon & Patton, 2022). STF has also been applied at the macro-level through the therapeutic system map that describes the career counselling relationships (Patton & McMahon, 2021). These systems maps encourage practitioners and researchers to contextualize their practice, identify other stakeholders and their roles, consider potential tensions in the systems, and identify and propose potential ideas for improvement. STF has made an important contribution at a micro-level by being applied to the career development of individuals, through one of its well-known applications, the qualitative career assessment instrument, *My System of Career Influences* (MSCI; McMahon, et al., 2005). By applying systems thinking and systems mapping, individuals map the influences on their careers and subsequently tell their career stories. This assists individuals to make meaning of their influences by examining the recursive relationships between these and assisting with career decision-making. The emphasis of the storytelling approach structured by the MSCI, on career development learning and connectedness, distinguishes it from other narrative approaches. The STF has been applied to better understand key components of the career development process (McMahon et al., 2017; Patton & McMahon, 2006).

The theory and accompanying assessment and multicultural career counselling instrument have been found to be useful and applicable with clients from diverse backgrounds and has been applied in the SA context, for example to capture the experiences of young black African people living in SA townships (Albien & Naidoo, 2016, 2017). McMahon et al. (2014) argue that since the STF and MSCI are sensitive to variables such as culture, socioeconomic status and other contextual variables, they will be useful in the 21st century SA context, providing

both a theoretical framework, as well as being part of a qualitative career assessment process (Patton et al., 2017). McMahon and Patton (2022) suggest that future research could strengthen the evidence base for career assessment instruments based on the STF, as well as the storytelling approach to narrative career counselling. They further state that greater use of systems methods enables different research questions to be asked, providing opportunities for people whose voices have seldom been heard in career research to be included.

Other theoretical conceptualisations designed to understand career development behaviour have drawn from principles of systems theory. In particular in relation to this thesis, Vondracek and his colleagues (Vondracek et al., 1986; Vondracek et al., 2014) highlight elements of the system theory as the basis of understanding career behaviour. The developmental- contextual approach to career development proposed by Vondracek et al. (1986) emphasises the importance of the context in human development, with a lifespan orientation being foregrounded to illustrate change over time. More recently, Vondracek and his colleagues (2014) proposed the LSVD as an integrative framework for career development. Vondracek et al. (2014) observed that previous systems theory-based approaches did not sufficiently define individual career decision processes, which are at the heart of the focus upon individuation within this approach. The authors emphasise the overriding insularity of existing career development theories and reiterate the need for theories of human behaviour to be embedded in the larger framework of a person's life (Patton et al., 2017).

In consideration of theories of career development that focus on the interaction between person and environment, as applicable to the South African context, this literature review will now focus on aspects of the Developmental-Contextual Framework (DCF) of career development (Vondracek et al., 1986) in more detail.

The Developmental-Contextual Framework (DCF) of career development

Making more explicit connections between theory and practice is a theme that is echoed throughout the writings of post-modern theorists. Moreover, the focus on the individual-in-context (Vondracek et al., 1986) in career guidance and career interventions of all kinds have been emphasised, where psychometric assessments were sometimes driving the agenda, rather than the individual in all their complexity, operating in a multitude of diverse environments (Vondracek et al., 2010). Using the DCF, Schoon and Parsons (2002) observed that development is conceptualised as the dynamic interaction between a changing (developing) individual embedded in a changing context. This interactive view was said to be different from Super's (1980) life-span, life-space approach, which took the individual as its focal point of interaction, or Gottfredson's (1981) developmental theory of occupational aspirations, which emphasised the effects of personal factors in career choices. An important

feature of more recent systems models is that they can accommodate and account for different historical contexts that can influence the circumstances surrounding the developing individual (Vondracek et al., 2010).

Vondracek et al. (1986) present developmental contextualism as an innovative conceptual framework useful for research into the relationship between family of origin and career development. They state that Bronfenbrenner's (1979) conceptualisation of the environment is a compatible perspective with their developmental-contextual view. The social ecological perspective of Bronfenbrenner (1979) argued that to understand human development, it is vital that the entire ecological system, or environment in which development occurs, is considered (Roberson, 2019). Vondracek et al. (1986) borrowed from Bronfenbrenner's (1979) ecological model of human development to emphasise the social environments influencing career development. According to Vondracek et al. (1986) and Bronfenbrenner (1979, 1995), human development (including career outcomes) occurs through complex reciprocal interactions between people and their environments (Puffer, 1998). The social ecological perspective proposes four ecological structures that describe the environment: the microsystem, mesosystem, exosystem and macrosystem.

As described in Bronfenbrenner (1979) and Vondracek et al. (1986), the microsystem is the system closest to the individual and has direct influence on their development. These contexts include a person's family, peers, school and neighbourhood. It encompasses the individual's personality and characteristics as well as the relationships and interactions between the individual and their immediate family and close relationships. The individual is not a passive recipient of experiences in these settings, but someone who contributes to constructing the settings (Ashiabi & O'Neal, 2015; Christensen, 2016).

The mesosystem refers to the interrelationships between the different microsystems, or connections between contexts. Microsystemic connections create a wider network of socializing that reciprocally interact, presenting different developmental influences when compared to a single microsystem (Puffer, 1998).

The exosystem refers to external environments in which a person is not an active participant, but the influences, decisions and events occurring in such environments have an effect on the individual, leading to various effects on the development process (Bronfenbrenner, 1979); these include the individual's parents' workplaces, community, media, and public institutions.

The macrosystem symbolises the influences of the broader society, values, economic climate, socio-political factors, material resources and opportunity structures, within which individuals find themselves. Bronfenbrenner (1979) points out that to be able to determine the

developmental influences of the environment on the individual, one must observe the individual closely. In addition, since there are many macrosystems, one must have a theoretical model that will enable the observation process to equally scrutinise all macrosystems (Soyer, 2019). Bronfenbrenner (1979) also points out that to ensure validity, environmental observations are insufficient, because the observer should weigh the meanings of aspects of the environment from the eyes of the individual. In addition, the individual should be observed several times, in order to improve validity.

Moreover, to derive conclusions about the effects of environment on development, longitudinal studies must be done (Soyer, 2019). One of the aims of the study to follow, is to ascertain what influences and impacts on students' career decision-making. The study can be said to be a longitudinal study as it follows up on students' career development over the course of their undergraduate studies (three years). This is designed to be a strength of the study, to understand the student within their contexts, within their influential environments, over a period and thus increases ecological validity as highlighted above.

Bronfenbrenner (1979) conceptualised the four environmental subsystems as being nested or embedded within each other. The developing individual is thus portrayed as being embedded in an interconnected set of contexts (Vondracek et al., 2010). However, the nested conceptualisation has been critiqued because it implies that the exo- and macro-systems' influences are distant from the individual; whereas they may have direct impact. Certain systems theorists have therefore moved from a nested approach to propose a more networked model (e.g., Neal & Neal, 2013), similar to the interactions between the elements within the individual contextual networks over time, as also illustrated in the Vondracek et al. (1986) model (see Figure 1). Bronfenbrenner uses the term system, rather than parts of the environment, to describe the interactive, relational and dynamic nature of the environment (Roberson, 2019), emphasising the interrelationship between different processes and contextual variation (Darling, 2007).

In order to understand the individual, it is important to take into account how the various systems interact with the individual and with each other. In addition to the four system levels described above, time (the chronosystem) is another important factor in the developmental ecological perspective. Both the individual and the environment change over time and Bronfenbrenner (1979) maintains that these changes are crucial to our understanding of how the different systems more or less explicitly influence the individual and their development. In Bronfenbrenner's theory (1979), everything is interrelated and interacts with each other, but to varying degrees and at different times. His theory focuses on relationships, both between people and between the different systems, which constitute our lives and our world. This

ecological theory of development has proven to be beneficial to provide an insight into all the factors that play a role in the growth and development of individuals. It also shows how all the factors are related to each other and affect the development cycle. Bronfenbrenner (1979) does not discuss each of the factors explicitly as such, but presents a basic theoretical and analytical framework.

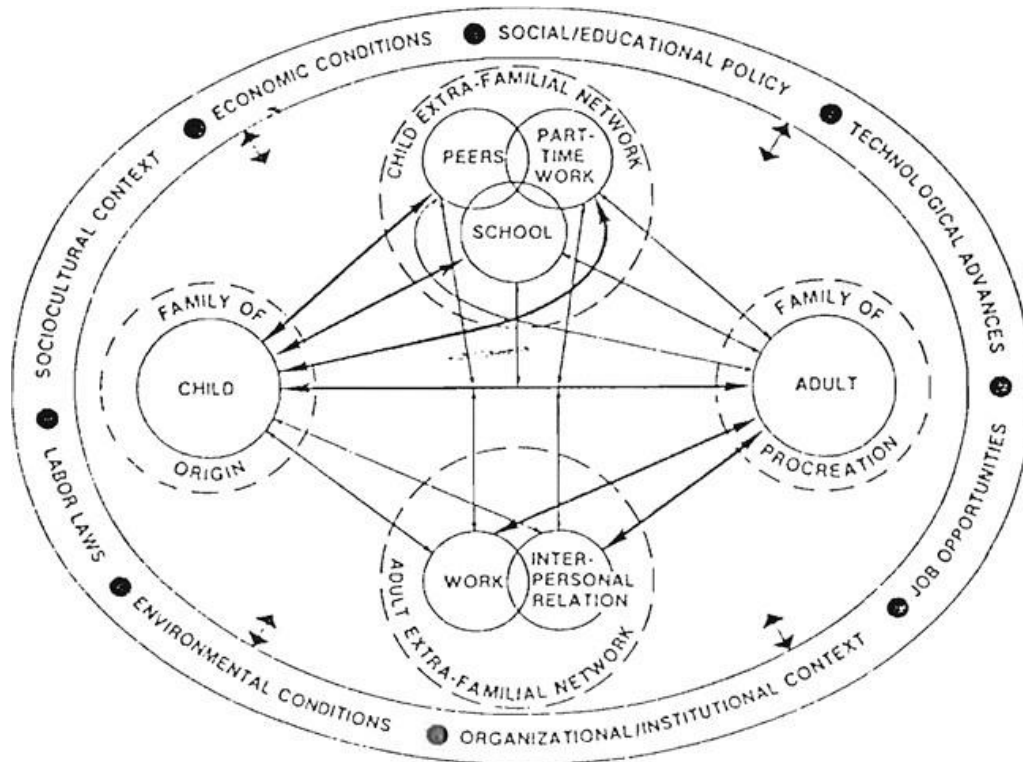
In addition, as noted earlier, Bronfenbrenner's (1979) four ecological levels are critiqued for not adequately provide a nuanced account for the proximal and distal contextual influences (Vondracek et al., 1986). His earlier version of ecological theory also disregarded the role of individuals in their development. However, his later version (the bio-ecological system theory, Bronfenbrenner & Morris, 2007), focused on the importance of the person's role in relation to their context, as captured in the Process-Person-Context-Time (PPCT) model (Ettekal & Mahoney, 2017). This is more aligned to the DCF of career development by Vondracek et al. (1986), which emphasises that a person's career development is as a result of the active connections between the person and their constantly changing environments (Phala, 2019).

The DCF is not a career theory but a conceptual model that is designed to assist with theory development. The term developmental-contextualism refers to the interrelationship of organicism and contextualism (Vondracek et al., 1986). Organicism portrays individuals as active constructors of their world rather than passive recipients. Contextualism emphasises the developing organism, the individual in relation to their changing contexts. Contextualism implies that the level of analysis (inner-biological, individual-psychological, community, culture and history) constantly change, that all levels of analysis are embedded into one another. Embeddedness means that the variables from one level dynamically interact with variables from other levels of analysis and these contribute to human functioning (Watson & Stead, 2017). "The context can inhibit or facilitate, spread up or slow down developmental progression, but it cannot alter the quality of the process or its frequential universality" (Vondracek et al., 1986, p.22). Developmental-contextualism therefore views the organism as influencing and being influenced by context.

Conceptualising individuals as self-constructing, self-regulating, and self-organizing living systems that function in multiple contexts eliminates the need to construct a different theory for males and females, for privileged and less-privileged, or for individuals who live in different countries (Vondracek & Fouad, 1994). The different economic, political, and socio-cultural conditions that are integral parts of individuals' experiences are properly recognized in the developmental-contextual model because the unit of analysis is the individual-in-context (Vondracek et al., 2010). A figure illustrating the model is presented below.

Figure 1

Developmental contextual framework of career development



Note: From “A Life-span Development Approach to Career Development”, by F. W. Vondracek, R. M. Lerner and J. E. Schulenberg (Eds), *Career Development: A Life-span Development Approach*, (p.79) 1986, Routledge.

The term dynamic interaction is central to this approach in that the levels do not function independently but interact reciprocally with each other. Multidirectional relationships between the self and context apply. Any variable or process (for example, career adaptability or a career decision) has the potential to be changed at any level of analysis. Another important term is affordances, this means that the environment may offer or provide something for the individual but only if the individual perceives it as such (Watson & Stead, 2017).

The developmental-contextual approach views career development as functioning within the broader framework of human development. Career development is a process and not isolated from the macrocontext (economy) and microcontext (family) that dynamically interact with the individual. Human development is multidisciplinary; the implication being that career development should also be viewed as such. Multiple situational and individual factors interact and have an impact with career development of individuals (Vondracek et al., 1986).

The lifespan orientation emphasises that career development is a process and not a single occupational choice. The lifespan perspective assumes that interventions throughout individuals' career journeys are possible. The intervention may be from various levels of analysis (peers, family, and school); and are aimed at changing something (e.g., behaviour, beliefs) that may also be changing. The model implies the need to develop effective interventions to understand the developmental history of individuals and the changing trends in the environment (Stead & Watson, 2017). Career development interventions require a comprehensive knowledge base that has an integrative view of the whole person, operating in complex sociocultural and physical contexts that views the person and the context as changing over time and as dynamically interactive across the entire life-span of the person and can therefore be lifespan development in focus (Vondracek et al., 1986).

Savickas (2002) points out an important consequence of this approach that career counsellors need to recognize: this is that the potential for change lies not in the individual alone but also in the context, and that individuals are producers of their own development. This contrasts with Stead's (1996) comments that earlier career research in South Africa focused exclusively on individual psychological processes. Career counsellors therefore need to help their clients actively influence their own development (Stead & Watson, 2017). The dynamic interaction of factors such as education, family, economy, history, culture and identity formation need to be understood when devising appropriate career development interventions (Watson & Stead, 2017). Counsellors who embrace this broadened perspective may thus extend their impact on the people they serve, and on their communities (Vondracek et al., 2010). Adoption of this approach transcends traditional disciplinary boundaries and creates diverse roles for career counsellors and researchers. Perhaps most importantly, depending on the socio-cultural context within which they operate, these practitioners could become agents of social change, focused upon designing theoretically-informed approaches to foster positive (career) development and, at the same time, fostering social justice (Lerner & Overton, 2008). This all resonates well with a more indigenously-oriented approach to career theorising and applications.

An understanding of the entrepreneurial aspects of how individuals act on various systemic levels is needed. The model does not describe the individual's resilience and entrepreneurial skills in a social context, because it does not see the individual as an independent actor. What is not that obvious is the individual's willingness to create, implement and take risks in order to fulfil the need to satisfy themselves and others, for example when engaging in entrepreneurship. Bronfenbrenner's model lacks these aspects of intra-level understanding (Christensen, 2016). Therefore, adding resilience and entrepreneurship to the model would provide a wider understanding of the individual's development and knowledge-based process.

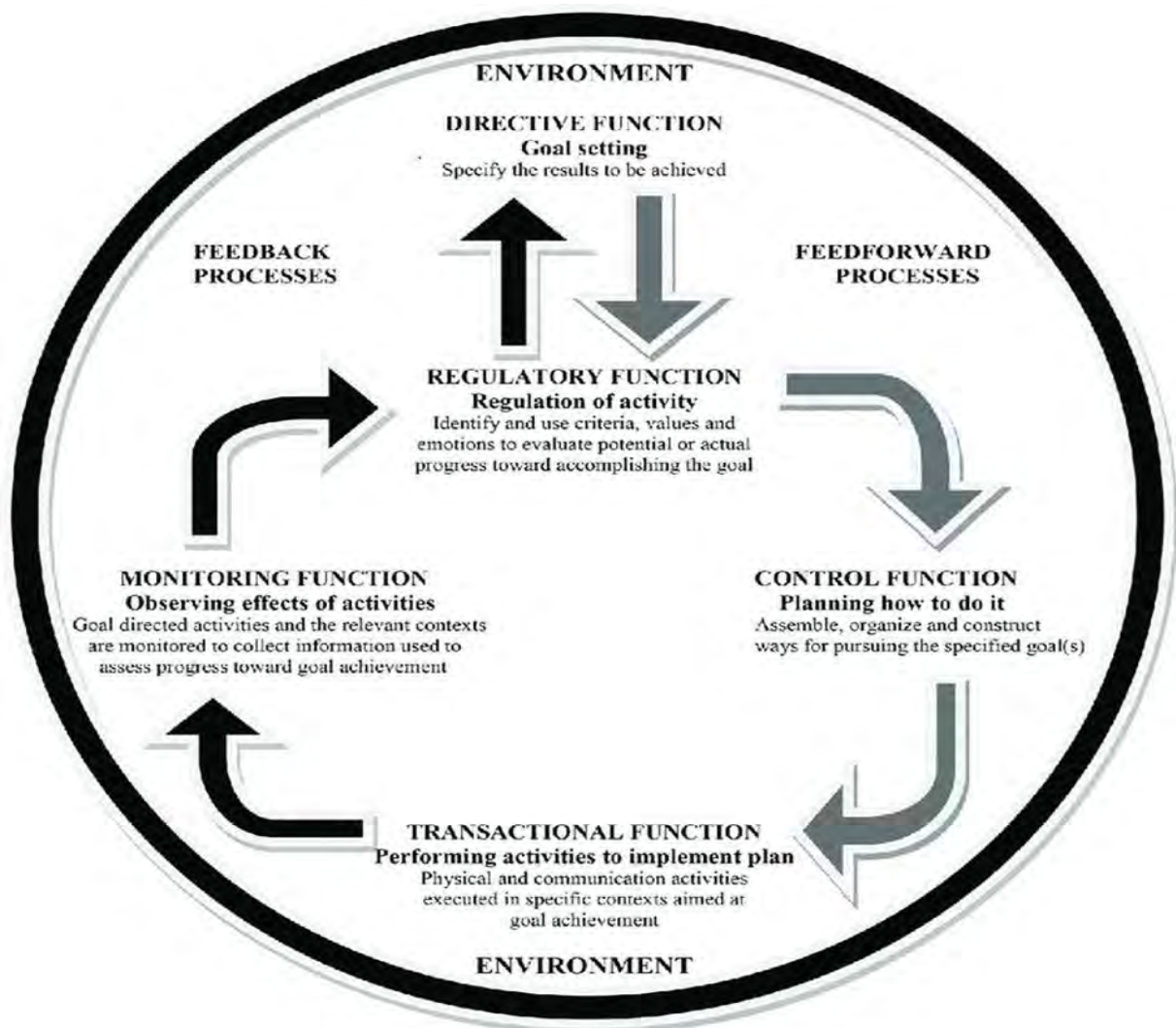
A conceptual framework that covers the entire life span and articulates relationships of the developing person with the various levels of context seems to be well-suited to the needs of career counsellors. Moreover, if used in the spirit of looking for similarities, agreements, and synergies, these in no way prevent the use of other frameworks or various theories. Without the life-span developmental metatheory umbrella, career psychology could continue to have great difficulties in trying to lay claim to expertise in career development across the lifespan; with it, the field may legitimately address issues related to the career development of children, adolescents, and adults of all ages (Vondracek, 2001).

A Living Systems theory of Vocational Behaviour and Development (LSVD)

Vondracek et al. (1986) emphasised integrative and comprehensive theorising, but their earlier model (as shown in Figure 1) lacked adequate propositions about the dynamics they emphasized. They identified multi-directional influences among systems components, but did not specify the processes by which these influences operate. This limited the use of their meta-theoretical model to conduct research and raised doubts about whether any existing comprehensive theory of career development might offer a useable, comprehensive and integrative theoretical framework (Vondracek et al., 2014). The LSVD's focus is on understanding vocational behaviour and development across the life-span. Consistent with Ford's (1987) living systems theory, it emphasises that the basic human development processes are the same for all kinds of human development (e.g., interpersonal relationships, family, health, career). It is therefore important that any theory that explains career development explains the meaning, not only of career, but also of development (Vondracek et al., 2014). LSVD as a career theory strives to fully integrate the individual within their contexts, not only conceptually but also methodologically. It provides the means to do so through the construction of behaviour episodes (BEs) and behaviour episode schemas (BES), to explain how the person-in-context sets goals, plans actions to pursue, and engages with the context to implement those plans. LSVD also incorporates and describes functions that continuously monitor the effects of the person's goal-directed activities through feedback and feedforward, making necessary adjustments to optimise goal attainment (Vondracek, 2018).

Figure 2

A typical behaviour episode



Note: From "Theoretical Foundation, The Living System Framework (LSF)", by F. W. Vondracek, D. H. Ford and E. J. Porfeli (Eds.), *A Living Systems Theory of Vocational Behaviour and Development*, (p.43), 2014a, Sense Publishers, Rotterdam.

A simplified version of the behaviour episode process model as seen in Figure 2 was described as follows:

A behaviour episode begins with a goal being set and then proceeds, via feedforward processes, to planning how to proceed toward accomplishing the goal. The next step in the behavior episode involves implementing the plan through interactions with the context. Progress toward the goal is constantly monitored via feedback processes, which may include emotional responses and the application of criteria and values, all designed to determine to what extent the goal has been achieved, whether it (and

planned ways of achieving it) should perhaps be revised, or whether it should be abandoned. (Vondracek et al., 2014, p. 3)

It is important to understand how learning takes place through behaviour episodes. No two behaviour episodes are exactly alike, but over time, people behave in similar ways; through past experiences, cognitively similar BEs become general frameworks called behaviour episode schemas (BES). When a new behaviour episode begins, the person may select a BES that is most closely related to the guiding goals and context of their new BE. Importantly, BES are not fixed structures, but they are flexible, adaptive patterns that are modified constantly to guide BEs. For example, people learn occupational skills and competencies by elaborating existing relevant BES. These self-constructed schemas play an important role: serving as a starting point for constructing a new episode, for example, a BE guided by the goal of choosing a university major or a first job (Vondracek et al., 2014).

An important feature of any LSVD-based intervention is its focus on the unique, whole person-in-context and on identifying an individual's satisfaction or pleasure-producing patterns of activity that already exist and that might provide a starting point for career development. Sensitive, skillful interpersonal interview methods are the key tools for helping a client identify these patterns. Standardised tests, commonly used in career guidance and career counselling, are of limited use because they may not take full account of the person-in-context, thus being unlikely to generate a unique BES profile, linked to unique personal career goals and unique school and work contexts (Vondracek et al., 2014). Therefore, traditional career methods should be used only as supplemental means for elaborating and understanding BES patterns, which are identified as potential starting points.

The complexity of person-in-context functioning is challenging and has contributed to the reluctance of career psychologists to embrace integrative and comprehensive theorising (Vondracek et al., 2014). Due to the challenges of operationalising the first model and the recency of the second, there is limited research on the application of both of the models represented in Figures 1 and 2. This study employs the DCF (Vondracek et al., 1986) as its theoretical base and will also draw on aspects of the LSVD model (Vondracek et al., 2014). The following section will explore the evidence of the application of the DCF in the South African context.

South African research using these models

Stead (1996) proposed that the DCF has the potential to foster an understanding of career development. He applied the model in SA during later apartheid years, and suggested changes that may need to occur in a post-apartheid era for career development to become a meaningful activity. He points out that the DCF emphasises the dynamic interaction between the individual and the individual's proximal (e.g., family, peers) and distal (e.g., sociocultural, economic) contexts; and that this dynamic interaction perspective overcomes a focus on either the individual or the individual's environment as well as an emphasis on a unidirectional relationship between the self and context. He also stated that this model stresses the importance of understanding the individual-context interaction as part of a developmental continuum that includes the past and present. The DCF encourages a multidisciplinary approach to career research; not only are the individual's characteristics salient but so are economic, cultural, educational, and socio-political factors.

Relatively little published research has focused on career development in SA using a DCF perspective, possibly due to the difficulties operationalising it (as noted above). Yet this perspective may be appropriate to understand and intervene in the career development of individuals who must cope not only with their developmental changes but also with dramatic environmental changes that complicate career exploration and planning. As indicated in the DCF, optimal career development occurs when the individual is able to cope with and adapt to changing contexts (Vondracek et al., 1986). Stead (1996) points out that it is important to examine career development in SA in terms of historical, cultural, socio-political, and economic factors, and to examine how such factors may interact with the career development of individuals. In particular, he provides ideas to enhance the career development of black adolescents. He also discussed the environmental and individual changes that may need to occur to promote career development that benefits both the individual and society.

The DCF was applied soon after the first democratic elections in a study in KwaZulu-Natal (Akhurst & Spencer, 2000), which aimed to investigate the use of a career education programme as a way to assist black students who were in a bridging programme between school and university (the Science Foundation Programme or SFP) at an institution of higher learning. Spencer's (1999) study was aimed at assisting the students enrolled in the SFP with increasing their self-knowledge in relation to their career decision-making, expanding their knowledge of work and careers, exploring issues of career planning, and developing social and group skills. Findings from the study were that the provision of career information that is not located in the participants' context is insufficient; because of the importance of contextual influences. The study also highlighted the value of group-based peer discussion as an

important adjunct to other existing career development methods. This study also discussed the limitations of a western, individualistic approach, particularly when working within a multicultural setting, with people from previously disadvantaged backgrounds.

In a study that aimed at enhancing, empowering and developing individuals' capacities within a group of unemployed young people in the Eastern Cape and exploring the role that a counselling psychologist might take, Schwartz (2016) motivated for approaches that are sensitive to the context of the individuals, especially SA individuals from disadvantaged groups. Findings from the study illustrated the impact of contextual and demographic factors on the participants' unemployed status and confirmed the negative effect of unemployment on psychological well-being, despite support from family, friends and community members. Recommendations from the study emphasise the inclusion of relevant social justice models for the context of SA in the training of counselling psychologists, and a need to engage in micro-, meso- and macro-level advocacy in the scope of practice of psychologists.

Following on from the above, Roberson (2018) applied the DCF with a group of employment-seeking young adults in a community centre, as the basis of a career development intervention. Findings indicated that the intervention as implemented facilitated greater self-knowledge in relation to career development, increased knowledge of work and careers, and enhanced career planning abilities. Similar to Akhurst and Spencer (2000), Roberson's (2018) study also found the peer group setting to be of value to facilitate self-reflection and motivation; as well as being a valuable source of career-related information. The study further highlighted the limitations of other career development theories and the importance of the utilisation and development of local (and cost-effective) career assessment materials.

Phala (2019) then used the DCF in a study with unemployed youth from disadvantaged backgrounds in the Eastern Cape (who were seeking to improve their school-leaving results), to facilitate career explorations and to understand individuals' perceptions of career education and the influences on their career decision-making and aspirations. The findings from her study highlight the need for more relevant career interventions to be investigated and implemented for the diverse SA population, especially in resource-constrained areas where access to printed materials are limited. The study's findings supported prior studies using DCF approaches as well as being group-based, which highlights the dynamic interaction between a person and their environment.

Microsystem

The microsystem represents the most direct contextual influences on the individual. “Activities, interpersonal relations, and roles, which are the elements of the setting, provide the links between the developing person and the given context” (Vondracek et al., 1986, p.47). There are various microsystem settings that are pertinent to understanding an individual’s career development, including the child’s family of origin, the child’s extra-familial network (peers, school, part-time work) the family of procreation (adult), and the adult extra-familial network (work, interpersonal relations), to be explored below.

Family of origin

The importance of family in career development cannot be underestimated (Vondracek et al., 1986). Blustein (1994) highlighted the importance of proximal (e.g., family and friends) and distal (e.g., cultural, political and economic) factors in identity formation. He added that the environment is important in providing the support and assistance necessary to encourage the career and self-exploration that is essential to the process of identity formation (Stead, 1996). This is echoed in Phala’s (2019) study, where it was found that parents are the main career influencers in their children’s lives and mothers were experienced as role models.

Cultural influences are a further more distal important factor in career development (Vondracek et al., 1986). An individual’s views about careers are determined by discourses, cultural values and situational constraints. Stead (1996) suggests that career researchers need to examine the meanings associated with important career constructs, such as career decision-making, career values and life roles, in accordance with the DCF; and that such interpretations are likely to be related to the familial, economic, and political context of the individual, as well as the individual’s unique ways of approaching career decisions. Thus, dated constructs such as career adaptability may partly be a function of cultural values and beliefs, occupational barriers, and personal factors. In addition, effective multicultural counselling includes an awareness of the usefulness of aspects of indigenous counselling practices and a realization that Euro-American career counselling techniques do not always address the concerns of students from more diverse or disadvantaged backgrounds.

Child’s extra-familial network

According to Vondracek et al. (1986), the school is perhaps second to the family in preparing the adolescent for future employment. Stead (1996) suggested that interventions to facilitate the career development of adolescents need to focus on both developing individuals and the various changing contexts surrounding the individuals. Changes at one level affect all other levels. Therefore, the most effective interventions are those that are coordinated at multiple

levels. Influences on and barriers to the individual's career development may increase with age, therefore interventions during adolescence are preferable and likely to be less costly, as young people generally have fewer career constraints and more career options than adults (Vondracek & Fouad, 1994).

Findings from Phala's (2019) study (with learners re-taking matric subjects to improve their options), demonstrated that individuals might be more open to exploring career development through group rather than individual counselling; and that career exploration including peer consultation was experienced as more desirable. Likewise, in their earlier study, Akhurst & Spencer (2000) found that the career education groups provided a powerful tool for HE students' collaborative learning experiences. These studies highlight the value of interactions within a group setting of peers, in enhancing self-awareness and career-related knowledge.

Adult extra-familial networks

Akhurst and Spencer (2000) reported on the value of group discussion for HE students (young adults) as a tool in career education, because others share their knowledge of the person and career-related information, relevant to their career exploration. The group discussion provided opportunities for gaining wider information and encouraged individuals to take more active roles in their career development and career decision-making. Then, working with young unemployed adults, Roberson (2018) used the SDS and CIP to facilitate the exploration of participants' occupational preferences and to expand their knowledge about the types of occupational roles that exist (beyond family contexts). This use of career tools enhanced the participants' capacities to expand and better articulate their self-knowledge; and enabled them to identify and describe aspects of their traits and interests more confidently. Her study supported the use of locally developed instruments, combined with a narrative approach to career assessment and counselling. This highlighted the possibilities of employing a blended quantitative-qualitative approach when designing an intervention for young adults.

Family of procreation

Starting a family also influences a person's career trajectory. In Akhurst and Spencer's (2000) study, five of the students reported being parents themselves, with their children living with either the maternal or paternal grandparents. It is not uncommon for the paternal or maternal grandparent to play a primary parenting role, especially in SA (Louw, 2013). This may free the younger parent from a number of responsibilities, but the expectation of making a financial contribution towards the running of the household is a common expectation, as reported by Roberson (2018) from her participants' accounts.

Macrosystem

The macrosystem represents more distal contexts and illustrates the dynamic interaction between the individual and the environment. Influencing factors include the sociocultural context, economic conditions, social and educational policies, labour laws, job conditions, social/educational policy, labour laws, job opportunities, the organizational or institutional context and technological advances (Vondracek et al., 1986).

It is important for psychologists and educators to consult with community groups as to which interventions are appropriate to their settings promote the career development. One cannot rely on existing career research only. Failure to discuss programmes with the target community in SA may result in individuals being indifferent toward or even rejecting these programmes (Stead, 1996).

Economic development and meaningful career development will depend largely on the extent to which individuals can transcend national boundaries and contribute to regional and global economies. Stead (1996) states that to improve the work skills of adolescents, an economic policy will need to address career development by improving the quality of primary and secondary education. He suggested that cooperation between schools and workplaces need to be fostered so that students become familiar with work environments. Regular career exhibitions, visits to businesses, and school or university visits by representatives of occupations should be encouraged. These should also be included in rural areas to encourage wider knowledge of occupations.

In the past, SA career research largely mirrored international trends. Researchers need to focus more on career issues that are important and particularly relevant to SA such as unemployment, economic factors, career barriers, the school to work transition, and the role of cultural influences in career choice. In this way more context-relevant research will be produced, in which the constructs employed are relevant and have meaning in the SA context (Stead & Watson 1998). Until recently, SA career practitioners have been too enamoured with international career theories and perspectives and have not shown enough openness to contemplating other techniques. Limited effort has been directed at developing appropriate career counselling techniques in recent decades. Stead & Watson (2017) emphasised that it is important for career practitioners to broaden their skills and knowledge by examining the wide variety of counselling approaches available and also generating new counselling models.

The following section will focus on literature relevant to the research question and will highlight important factors underpinning career development in HE, with a focus mainly on SA research.

Career development in Higher Education

Student counselling services are recognized globally for their role in promoting holistic student development. Such services have evolved over time and respond to and reflect the changing landscape of HE and the broader society within which it is embedded (De Jager, 2012; LaFollette, 2009). Diverse student needs and challenges necessitate a holistic and multidisciplinary approach to student counselling practice (Naidoo & Cartwright, 2018). Student counselling centres have the responsibility to conduct ongoing evaluation and accountability research, in order to assess the effectiveness of their services and to find ways in which to improve those (Boyd et al., 2003). It is useful to make use of some sort of quality control, such as internal or external benchmarking, in order to maintain and improve the standards of their services and procedure and finding out about students' needs (Cilliers et al., 2010).

Evaluating counselling services in HE

In 2000, the Centre for Student Counselling and Development at Stellenbosch University conducted a survey concerning the nature of student counselling centres in South Africa and how they function. According to Brand and Cilliers (2000), the most frequent presenting problems encountered by students were academic problems, career choice issues and self-concept problems. In a similar study in March 2008, nineteen national student counselling centres were contacted and requested to complete the Student Counselling Benchmark Questionnaire that was adapted from the Brand and Cilliers' (2000) survey. The 2008 study indicated that the main focus was crisis interventions, psychotherapy, career counselling and substance abuse counselling. Therefore, career counselling had remained a central focus area at SA counselling centres over time (Cilliers et al., 2010). Recommendations from the 2008 study suggested that future research conduct a student needs assessment in order to obtain the students' perspectives on the services of counselling centre units, thus comparing the functioning of counselling centres with the expectations and requirements of the student population (Cilliers et al., 2010). The 2000 and 2008 studies' implicit benchmarking made use of information from a survey through extended collaborative research. Institutions could then conduct independent benchmarking to compare their own practices. This study employed an independent evaluation of counselling services where a deliberate process is followed, with the aim of self-improvement.

The above study highlights the critical role that student counselling centres need to fulfil to strengthen student counselling and development centres, which offer a wide range of services to students. The increased access to universities in SA by underprepared learners necessitated the evaluation of their needs in order to avoid high dropout or failure rates

(Nicholas, 1996). There are a great number of first-year university students who could have poor study skills and are enrolled in programme in which they may be unsuited for, and may not be familiar with seeking or using counselling to assist them with their problems (Mabizela, 2014). The Directorate for Career Counselling and Development at the University of South Africa (UNISA) conducted a study in 2012 to explore first-year students' counselling needs. A descriptive research design was employed: a survey questionnaire was emailed to all first-year students. Results indicated that first-year students need counselling on adaptation to studying at an Open Distance learning institution, with factors such as knowing career opportunities, improving study skills, preparing for examinations, identifying further career opportunities, preparing career portfolios, preparing for job interviews and dealing with exam failure. 69% of students reported they would like to find out about career opportunities related to their studies. This indicated that first-year students are concerned about career development opportunities related to their programme of enrolment. The findings further suggested that strategic measures should be developed to ensure student retention and success; and that approaches from different angles and knowing student counselling needs could possibly provide fresh insight for redefining and implementation of such measures (Mabizela, 2014).

Follow-up career counselling services in HE

It is well documented that many young people in SA, particularly those from rural and disadvantaged communities, do not have access to structured career counselling, in either schools or communities (Altman, 2010). It is clear that more structured proactive action should be taken to help new students think about or rethink their intended career directions before they register (Simpson, 2008).

The National Plan for Higher Education (NPHE) (DoE, 2001) encourages HEIs to offer or continue to offer extended curricular in an effort to improve the access and success rates of students from disadvantaged backgrounds. An investigation into various extended degree programmes in SA revealed that aspects of career development are often incorporated into the curriculum. The underlying rationale for inclusion is that career decision-making is a complex process. It appears that many students are not sufficiently equipped to make career decisions when entering HEIs. Many are unsure of their career choices (De Bruin, 2011). Schools often lack the resources and infrastructure to prepare students for university (Quayle & Essack, 2007). A study aimed at investigating the relationship between self-directed learning and career decision-making among first-year university students in extended degree programmes revealed that these students may be underprepared not only in terms of academic requirements but also in terms of career decision-making skills (De Bruin, 2011). It

was highlighted that career decisions should not be regarded as a single event aimed at choosing a career but rather as an ongoing process in which the individual actively participates in constructing their career (Patton, 2005). The greatest limitation of the study was the sole use of psychological tests. It was recommended that future research on the career decision-making of university students in South Africa includes a qualitative component where students' career decision experience can be captured by means of in-depth interviews (De Bruin, 2011).

At UNISA, the problem was addressed, firstly, by issuing all new students with a guidance publication titled *mychoice@unisa*, and secondly by means of the Mass-based Career Counselling (MBCCP) project, which was based on the theory of Situated Agency (Van Schoor, 2012). Students who worked through the *mychoice@unisa* and still needed assistance were encouraged to engage with the Directorate for Counselling, Career and Academic Development for further assistance. These students were contacted by means of e-mail, SMS and telephonically and assisted with information and counselling. The purposes of the project were to ensure that all new students who applied for admission to UNISA were made aware of the importance of a well-considered career choice and the role this plays in motivation and study success. After about six months, the students were followed up to assess their experiences of the process. The study suggested that a large number of new UNISA students did not have the benefit of structured career counselling, as 33 748 students indicated that they needed further assistance with career planning and selection of appropriate study programmes and subjects. The important need to expose newly registered students to some form of career counselling to make them consider and reconsider their career choice was confirmed.

Another important finding from the study was that though a large number of students reported the need for career counselling, about half of the group did not have the benefit of being reminded to follow up on this. These students registered online, did not read the *yourchoice@unisa*, and would not therefore have been alerted to the importance of making a career choice. In addition, in spite of the exposure to *yourchoice@unisa*, a sizeable portion of students was still confused about their career choices. This emphasised that making a career decision is not a simple informational process and that for some students, professional human intervention is still required. To address these problems, proactive career guidance and counselling approaches emerged from the study. Some included personal interventions either face-to-face (including workshops with small groups of students) or telephonically. Data showed that students reportedly benefitted from personalised contact, which had promise for improved study success (Van Schoor, 2012). As the Van Schoor (2012) study highlighted, continued support should be provided to all students who need time to make up their minds to make informed career choices.

A research study that explored academic advising as a profession and academic advisors as practitioners in the SA HE sector was conducted at a research-intensive public university within the faculty of Commerce, Law and Management (De Klerk, 2021). The researcher used a baseline data set created from engagements as an academic advisor with students over a three-year period (2015 to 2018). The baseline data revealed the diverse and multifaceted range of matters that academic advisors need to be equipped with in order to assist students, and the importance of networking with institutional support services and academic advisors from other faculties. The study also highlights the highly complex nature of academic advising as an educational practice within HE. The data included follow-up sessions, which provided updates on matters discussed during previous consultations or general check-in conversations to see how the student was doing; they discussed new matters arising, and provided progress updates. The fact that the student attends follow-up engagements can be said to show accountability and may indicate that the student needs interaction and engagement, as well as appreciating support and advice. However, only a small percentage of the data (8%) included follow up sessions. Not all consultations require follow-up engagements, but for many students it signals an important link to someone within the institution who takes an interest in their well-being (De Klerk, 2021).

A case study of processes was conducted following a three-year project (2018–2020) at the University of Cape Town, aimed at conceptualising, designing, and implementing an academic advising system to support better outcomes for all students (Van Pletzen et al., 2021). The study revealed that effective and meaningful academic advising is found in developing a context-specific system, including a shared model that is best suited to the institutional context. The study also suggested that the design of an academic advising system must be guided throughout by students' experiences and that focus groups provide rich data (Van Pletzen et al., 2021).

Qualitative and quantitative career counselling in HE

A number of years ago, it was noted that the majority of university students lack the knowledge and experience required to make an informed decision about which major to choose and what career path to take (Kelly & White, 1993 cited in Orndorff & Herr, 1996). Students stated that a major reason for university enrolment was to prepare for a career, but they were uncertain about such preparation (Astin, et al., 1993). Students who do not make a confident decision about their career goals are more likely to drop out of studies (Newton & Gaither, 1980 in Reese et al., 2010), have lower grades and have more difficulty with adjusting to university (Plaud et al., 1990 in Reese et al., 2010). These early studies are supported by recent evidence where students who receive little to no career counselling are consequently either excluded from sought-after fields of study at HEIs or lose interest in their studies after having enrolled for particular fields of study (Maree, 2012). This was found to be especially true for first in their generation to enter university (UNISA, 2018), where most students might not be familiar with

the options that they have when they access HE, nor are they familiar with how things work at university (Schoeman et al., 2021). A study that focused on both quantitative and qualitative career counselling and the strength of this approach was evident in a research project where the effects of a university career development course on career decision-making self-efficacy were investigated at a small private university in the Southwestern United States (Reese & Miller, 2006). The course was developed to assist undecided students with career decision-making. Students who completed the course showed increased career decision-making self-efficacy, specifically in the areas of obtaining occupational information, setting career goals and career planning; and reported lower perceived career decision difficulties. The study suggested that future career intervention research needs to investigate the processes and mechanisms of change. A follow-up to the Reese and Miller (2006) study at a small private university in the Southwestern United States was conducted over a 2-year period. This was to assess whether modifications made to the course, using the Reese and Miller (2006) data as a baseline, had resulted in improvements. Modifications over the 2-year period were made to the career course each year based on data from the course in the previous year. The career development course was designed to meet the needs of students in the deciding phase of selecting a major, career or wanting to confirm or change their major course of study. For both years of the study, the course continued to consist of completing assessments (interests, personality, values, and decision-making), lectures, group activities, guest speakers, and structured assignments that included reading and reflective writing. A career genogram assignment was also added to evaluate how family and other contextual factors may have shaped how students view themselves. Results indicated that a career course that was informed by theory and research could be effective in increasing the career decision-making self-efficacy of students when compared to a quasi-control group. The 2-year study illustrates one example of how theory and research can be effectively used to inform practice with a career development course, to build a form of practice-based evidence (Reese & Miller, 2010).

Research projects aimed at designing intervention guidelines, to facilitate access to and success in HE, recommend an integrated, qualitative and quantitative approach. In a project conducted by the University of Pretoria over a decade ago, 100 learners from disadvantaged regions enrolled for degrees in education with the view of becoming teachers (Maree, 2011). All students were enrolled in a comprehensive programme of development support to complement their academic work. Among these was career counselling offered by the Faculty of Education, as this emerged as the biggest single challenge. The rationale for this support

package was that predominantly students from disadvantaged education backgrounds required sustained support, when brought into a competitive university environment. The students achieved outstanding results, but only a small minority graduated with degrees in Education. This occurred because exposure to quantitative and qualitative career counselling (simultaneous integrated quantitative and qualitative assessment) alerted students to the wide range of fields of study and careers. Most of them subsequently succeeded in other fields of study. The value of a combined approach to career counselling in helping students in their career endeavours was highlighted in the study.

A SA study that employed both quantitative and qualitative data collection as part of students' career development (Cook & Maree, 2016), developed an intervention programme that helped learners from two contrasting educational settings manage career-related transitions. Convenience and purpose sampling were utilised, making use of a mixed-method approach. Quantitative data on students' career adaptability was gathered from pre-and post-intervention results of the Career Adapt-Abilities Scale (CAAS) (Savickas & Porfeli, 2012). Qualitative data were gathered during in-depth focus group interviews and discussions, including completing the Career Interest Profile (CIP), collage and lifeline techniques. Results revealed that career and self-construction helped participants manage career-related transitions and improved career adaptability. The study highlights the effectiveness of using both qualitative and quantitative career counselling in SA.

Academic and career advising in HE

HE in SA has focus on widening access and has extended to include a strong emphasis on student success. Significant progress has been made to retain and successfully graduate students (Department of Higher Education and Training, 2019). However, despite this progress, there are still many challenges to overcome. The majority (at least 70%) of students who enter HE in SA are also the first in their generation to enter university (UNISA, 2018). This implies that most students might not be familiar with the options that they have when they access HE, nor are they familiar with how things work at university (Schoeman et al., 2021). Research suggests that quality career guidance, which will enhance clarity about students' career ambitions and interests, personal development plans, and employability, should be considered in all institutions (Okolie et al., 2020). Career advising in HE has recently been professionalised in SA, as evidenced by the recent launch of SA's first Academic Advising Association, ELETSA (Advising in Sesotho), in 2021. The only Academic Advising Professional Development (AAPD) training programme, which is accredited by the South African Qualifications Authority, is offered by the University of the Free State (UFS) (Schoeman et al., 2021).

There are some overlaps between career advising and similar practices in HE, such as career counselling and career services. Some of these overlapping aspects include professional competencies used by academic advisors who provide career advice, counsellors who provide career counselling, and other professionals who collaborate with career services. A study by Schoeman et al. (2021) argued for the integration of academic and career advising to provide more holistic support to students and they propose a contextualised framework to achieve this integration. The contextual inputs provided by participants in the study were responsive to the fact that the majority of students in SA are first-generation students. Such students might need more guidance in the “inquire” phase to find information, and an extension of the “integrate” phase, to allow them to implement their plans and to provide them with feedback. Recommendations included deliberate training and networking to assist advisors to gain specific competencies to integrate academic and career advising to assist students holistically and to meet the needs of the institutional student population (Schoeman et al., 2021).

A collective approach to decision-making in certain situations and services delivered to students enriches the value of the services offered. Best practices of academic advising at the Durban University of Technology included collaboration, which expedited the ability to reach out, thus increasing the level and quality of engagement with students. This was seen in cross-unit collaboration with the students’ counselling centre, where counselling was required to realign students to their academic and life goals (Obaje & Jeawon, 2021).

Career assessments and counselling for prospective and registered students form a core component of South African student counselling services (SAACDHE, 2007). Future research may assist in specifying which inventories are useful in career counselling and which assessment measures may not be very helpful. This line of research could assist practitioners who have questions about the usefulness of current inventories (Whiston et al., 2017).

Relevance of this review to the design of the study

The above literature review highlights the critical role that student counselling centres need to fulfil to strengthen student counselling and development services in providing relevant services that address the needs of students. The study to be described in what follows hopes to contribute towards this recommendation by evaluating the services offered at a SA university career centre, specifically considering students’ perspectives and experiences of the career counselling services. The findings from the study thus aim to assist in tailoring career services according to students’ needs and expectations. This study will build on some of the literature review recommendations by employing a longitudinal approach, following students’ career trajectories through their undergraduate studies. The study aims to gain an indication of the perceived effectiveness of the career assessment tools used at the centre

and to ascertain the influences that impact individual students' career decision-making, over the course of undergraduate studies. The value of a combined approach to career counselling in helping students in their career endeavours has been highlighted in the literature review. This research will build on this recommendation by using both qualitative and quantitative approaches through the use of career assessment, career counselling and in-depth interviews.

This chapter discussed Indigenous psychological approaches and provided an overview of Systems approaches to career counselling and assessment, related to the SA context. It then presented an overview of the developmental-contextualist perspective that underpins the Vondracek et al. (1986) DCF of career development, with a description thereof. The discussion of the application and relevance of this model in the SA context was then presented, by referring to relevant research application of this model. The LSVD (Vondracek et al., 2014) was also briefly described. The chapter concluded with an overview of studies relevant to the research question and important factors underpinning career development in HE. The following chapter will outline the methods employed in conducting this research.

Chapter 4: Methodology

This chapter outlines the methods used in conducting this research, to answer the research questions. This chapter starts by outlining the theoretical framework in which this research is situated. Ethical requirements and the research design are explained, followed by a description of the multiple case study approach and the methods used to collect data. The pragmatics of data collection procedure, transcription, and analysis are explored, followed by a section detailing the key ethical considerations of this research. The chapter ends with a reflection on my position in relation to this research.

The aim of this study is to evaluate the relevance and effectiveness of a university career counselling services from the students' perspective. It focuses on gaining an indication of the perceived effectiveness of tests used and ascertaining the influences that impact individual students' career decision-making over the course of undergraduate studies.

Research questions

1. What is the relevance and effectiveness of career services at a university?
2. What role do psychometric assessments play to assist students in their career decision-making?
3. Which factors appear to impact career decision-making and assist students to make career-related decisions?
4. How do students' study trajectories unfold after their career assessment and which influencing factors become evident?

Pragmatic paradigm

The word pragmatism is originally derived from the Greek word "pragma" which means action, a central concept of pragmatism (Pansiri, 2005). The term "pragmatic" means searching for feasible, workable solutions to complex human problems in their natural settings. As a research paradigm, pragmatism orients itself toward solving practical problems in the real world (Biesta, 2010). It emerged as a method of inquiry for more practical-minded researchers (Creswell & Clark, 2011). In the pragmatic paradigm, programmes or interventions are designed to address a pertinent social or psychological problem within a naturalistic, real-world setting, in a manner that is feasible, effective, and efficient (Fisherman, 1991). The pragmatic paradigm focuses on getting projects and programmes to work within their particular real-world settings, aiming to provide solutions to context-specific, practical psychological problems and at the same time creating practical knowledge that can be used to make a purposeful difference in practice (Goldkuhl, 2012).

Pragmatism is situated somewhere in the centre of the paradigm continuum as a mode of inquiry. Postpositivism on the one hand supports quantitative methods and deductive reasoning, whereas constructivism emphasises qualitative approaches and inductive reasoning. Pragmatism embraces the two extremes and offers a flexible and reflexive approach to research design (Feilzer, 2010; Morgan, 2007). As a research paradigm, pragmatism is based on the proposition that researchers should use the philosophical and methodological approach that works best for the particular research problem that is being investigated (Tashakkori & Teddlie, 2010). It is often associated with mixed-methods or multiple methods (Bietsta, 2010; Creswell & Clark, 2011). It embraces a plurality of methods, which is a significant strength of pragmatism, where the focus is on the consequences of research and on the research question rather than on the methods (Kaushik & Walsh, 2019). Pragmatic inquirers may select any method based on its appropriateness to the situation at hand (Green & Hall, 2010). In adopting this stance, the pragmatist researcher is able to select the research design and methodology that are most appropriate to address the research question (Kaushik & Walsh, 2019). Thus, for the mixed-methods researcher, pragmatism opens the door to multiple methods, different worldviews, and different assumptions, as well as different forms of data collection and analysis.

The person-in-environment concept is a main feature of pragmatism and can be traced back to Dewey's (1938) organism-in-environment perspective, which views humans as organisms and knowledge as arising from an active adaptation of organisms to their environments. The focus of pragmatism is on the human capacity to learn, reason, and make choices in our environment, respond to, and interact with our environments, and adapt to them and modify it in various ways (Kaushik & Walsh, 2019). Pragmatic approaches to inquiry situate the inquirer in a natural setting. This approach acknowledges the tentative and tension-filled nature of human existence. In the pragmatic approach, reality is viewed as experience-dependent, and knowledge is obtained within the context of inquiry (Greenberger, 2014). Dewey (1938) insisted that a research problem is legitimate for inquiry only if it is socially situated and that inquiries are natural and grounded in problems. Dewey's philosophy holds that inquiries are both interrogations of theory and practice and are also evaluative (Kaushik & Walsh, 2019). This aligns with this study, since the researcher, who is grounded in this study (as a psychologist providing career services at the centre), aims to interrogate and evaluate the career counselling services at a university career centre. Pragmatism supports theory, endorses eclecticism and pluralism (different, conflicting theories and perspectives), and allows the flexibility to choose various combinations of methods which includes observation, experience, experiments, and action (Ormerod, 2006). These are all useful ways to understand people and their world (Kaushik & Walsh, 2019). Pragmatism endorses strong

practical empiricism (practical theory), where theory informs effective practice to determine what works (Johnson & Onwuegbuzie, 2004). The pragmatic stance advances mixing multiple sources of evidence to obtain and modify knowledge, which in turn is used to inform potential solutions or various lines of action and to consider their consequences (Green & Hall, 2010). The results of pragmatic research are viewed as assertions that become warranted in terms of their transferability in different situations (Johnson & Onwuegbuzie, 2004). From a pragmatic stance, the researcher needs to work back and forth between the specific results and their general implications (Morgan, 2007). Thus, research with a pragmatic stance is an active and interactive process of establishing inferences that are applied in new experiences. Warranted inferences represent actionable knowledge, that is knowledge that can be acted upon or knowledge that is directly actionable for improving or addressing the research questions being studied. The pragmatic inquirer engages in ongoing reflection on research decisions and results, assessing their practical worth and actionable value. The pragmatic inquirer further engages in ongoing communication with those in the inquiry context, seeking support for the practical value of what is being studied (Green & Hall, 2010). Pragmatism fits well with this study as the research provides an important opportunity to reflect on outcomes, goals, assumptions and values, to consider the ways in which the data inform and support possible actions for future practice.

Pragmatism takes on a value-orientated approach to research that is derived from cultural values, and endorses shared values such as democracy, freedom, equality and progress, which aligns with the researcher's values. Pragmatism places high regard for the reality of and influences of the inner world of human experience in action. Knowledge is viewed as being both constructed and based on the reality of the world that we live in. Pragmatism views current truth, meaning and knowledge as tentative and as changing over time. Instrumental and provisional truths that we obtain and live by are obtained through experience and experimenting. Instrumental truths are a matter of degree and are not stagnant. What we obtain on a daily basis in research should be viewed as provisional truths; practical epistemology moves us towards larger truths. Theories are viewed instrumentally, they are true to different degrees based on how well they currently work; workability is judged especially on the criteria of predictability and applicability (Johnson & Onwuegbuzie, 2004).

Practitioners can use the conceptions of pragmatism as orientating perspectives for critical thinking and decision-making for practice (Borden, 2013). To inform and justify the professional practice, practitioners need to identify and provide a range of evidence for effective interventions (Kaushik & Walsh, 2019). A pragmatic approach fits closely with this objective; it allows the researcher to gather evidence from a range of sources and to critically, evaluate their strengths, limitations, and applicability to practice (Plath, 2013). Thus, a

pragmatist worldview helps bring together scientific and humanistic domains of understanding. It assists practitioners to focus their attention on essential concerns in practice. It allows researchers to utilise knowledge, ideas, and expertise from practitioners as well as clients to advance ideas, address research goals, and create socially useful knowledge (Feilzer, 2010; Koenig et al., 2019; Thompson, 2012). Knowledge is not about an abstract relationship between the knower and the known; instead, there is an active, continual process of inquiry (Morgan, 2014), that is experience-dependent (Greenberger, 2014). Thus, one of the primary goals of pragmatism is to create practical knowledge that can be used for making a purposeful difference in practice (Goldkuhl, 2012), which is an important aim of this study.

A pragmatic approach to inquiry is thus appropriate for this study. It situates the researcher in a natural setting, where the researcher provides a career assessment to students at a university career centre and follows up with these same students, in order to track their career trajectories over the course of their undergraduate studies. This study employs practical means to obtain knowledge, using a mixed-method approach including the analysis of both qualitative and quantitative data, an important strength of pragmatism.

Ethical requirements

Ethics flow from a system of moral principles embraced by a society or a specific community. They reflect the norms and rules for acceptable behaviour. Research ethics, which are developed and embraced by a community of scholars, govern and guide the practice of researchers (Rule & John, 2011). Pragmatism wants ethicists to undertake empirical research aimed at establishing people's experiences, use findings to describe and clarify moral decision-making, and to use data to develop applied theories of moral decision-making grounded in reality (Kloppenber, 1996). Pragmatists remind psychologist that looking at moral problems in an abstract way may not always be beneficial to people. Pragmatists propose that researchers use rhetorical reasoning associated with casuistry and premises grounded in research or experience to find solutions to moral problems (Allan, 2016).

This research was done in accordance with the Rhodes University ethical guidelines and it adhered to an ethical code of conduct as outlined in the *Ethical principles of psychologists and code of conduct* (American Psychological Association, 2017). The relevant ethics committee of the university (PSY2017/10) granted ethical clearance. Please see Appendix I for the ethical approval letter.

The principle of autonomy refers to competent people's rights to freely and voluntarily make informed decisions; it embraces the idea that the researcher should not compromise personal autonomy (self-determination). It translates into the need for the researcher to respect and protect any individual's right to be fully informed, to decide whether to participate, and to

choose to withdraw from the study (Allan, 2016; Rule & John, 2011). This study was conducted with young adults from the age of 18 years who were asked to voluntarily consent to participation in this study. Permission was granted to access students' files to identify students that received career counselling and career assessment at a university career centre. Informed consent from participants was thus important, fully understanding to what they are consenting (Howitt & Cramer, 2011). Informed consent includes informing the participants about the aims and the research and what their participation will entail. Before filling in the consent form, participants were provided with all the necessary information pertaining to the research so that they could make a well-informed decision on whether or not to participate in the study (see Appendix 4). All participants were informed that they may withdraw from the study at any time (see Appendix 5).

Data protection covers any personal data held by the organisation as well as the research data. In order to safeguard participants' privacy, confidentiality and anonymity, all files, written and voice recorded data were kept in a locked cabinet, stored in password-protected systems, and treated confidentially. No participant names have been included in the write up of the study; pseudonyms were chosen for them by the researcher.

Non-maleficence (do no harm): this principle requires researchers not to cause harm in the course of their study, ensuring that every stage in the research process, the research participants, and the organisation are not maligned or harmed in any way (Allan, 2016; Rule & John, 2011). The study was designed specifically to benefit and not harm the participants in any way, as supported by the findings. The study followed undergraduate students' career trajectories and provided an opportunity for career guidance throughout their undergraduate studies. Feedback and follow-up sessions were an interactive process between the researcher and participants. The process also focused on what was important to the participant. The principle of beneficence requires that psychologists anticipate that participants may feel emotionally upset by the feedback, which may trigger a crisis; psychologists must therefore have a plan to deal with such eventualities (Allan, 2016). Additionally, participants were provided with information on how to get further professional support should the need arise.

The justice principle is particularly important in respect of psychological testing because a fundamental characteristic of these is their ability to discriminate among the abilities, personalities, and other psychological characteristics of people by comparing the performance of individuals with a norm group or population. Given the potential impact of psychometric data on people's lives, psychologist must choose, administer, score, and interpret assessment procedures appropriately and accurately (Allan, 2016). All psychometric assessments used in

this study were administered, scored, and interpreted in accordance with specific standards as laid out by HPCSA for conducting psychological testing.

Psychologists can deviate from standard test practices if they can justify their behaviour, preferably with reference to reputable research (Allan, 2016). This study employed the trial use of the SACII (South African Career Interest Inventory), an emic South African developed interest inventory. Although this test is not registered under HPCSA due to it being a “new” test under development, studies have found the inventory applicable to the South African context for the use of career assessment and counselling (Morgan et al., 2014; Rabie, 2017). Ethical consent was obtained from the test developers to use the SACII for this study. Please see Appendix II for research ethical agreement.

Beneficence (for public good) suggests that research should aim to contribute to public good (Allan, 2016; Rule & John, 2011). All research comes at a cost to society and participants, even if they voluntarily contribute their time. Therefore, no research is justified if participants or society as a whole will not benefit from it (Allan, 2016). This study hopes to identify and highlight the important factors that contribute to the career decisions of students. It hopes to provide some guidance on what career counselling interventions and assessment measures are most useful to students in a SA HE context. It is an attempt to tailor career counselling services to the needs of SA students.

Mixed-methods

Mixed-methods research may be viewed strictly as a method, allowing researchers to use a number of philosophical foundations for its justification and use. The researcher and the research problem determine the best paradigm, not the method itself (Hanson et al., 2005). Tashakkori and Teddlie (2003) argue that the research question should be of primary importance; more important than either method or the theoretical lens or paradigm that underlines the method. The pragmatists assert that regardless of circumstances, both methods may be used in a single study. For many mixed-method researchers, pragmatism has become the answer to the question of what is the best paradigm to use (Hanson et al., 2005). Pragmatism is well developed for integrating perspectives and approaches. Pragmatism offers an epistemological justification (via pragmatic epistemic values or standards) and logic (the use of combination of methods and ideas that helps one best frame, address, and provide tentative answers to research questions) for mixing approaches and methods. A unique feature of pragmatism for mixed-methods research is that it includes a wide range of theorists for consideration (Johnson et al., 2007).

This research was designed to employ a mixed-methods research design: an approach to inquiry that includes collecting both quantitative and qualitative data, integrating the two forms of data (Creswell, 2014). Mixed-methods research provides an opportunity to develop novel theoretical perspectives by combining the strengths of both methods. Thus, it provides rich insights by overcoming limitations associated with either method alone (Venkatesh et al., 2016), providing a more complete understanding of a research problem than either approach alone (Creswell, 2014). Creswell (2003) suggests that some form of mixing or interrelating the data provides better insight into research problems than collecting only quantitative or qualitative data or collecting both forms but not making a connection between them. The advantage of collecting both forms results in quantitative data yielding generalisable trends and qualitative data providing in-depth voices and experiences of individuals within a specific setting or contexts (Greene & Caracelli, 1997). Combining the two forms of data seems to enhance the utility of each (Creswell & Creswell, 2005). An in-depth perspective provides more information than either quantitative or qualitative alone can offer. Using both methods may allow researchers to generalise results from a sample to a population. It allows researchers to test theoretical models and modify them based on participant feedback. Results of instrument-based measurements may be augmented by contextual and field-based information (Hanson et al., 2005). Using both forms of data for this research study may contribute to a deeper understanding of the research topic.

In mixed-methods studies, data analysis and integration may occur by analysing the data separately, by transforming them, or by connecting the analyses in some way (Hanson et al., 2005). The research takes the form of an explanatory sequential mixed-methods approach. This design involves two phases in which the researcher collects quantitative data in the first phase, analyses the results, and then uses the results to plan (or build on to) the second, qualitative phase. The overall intent of this design is to have the qualitative data to help explain in more detail the initial quantitative results (Creswell, 2014). The quantitative data analysis provides a general understanding of the research problem. The qualitative data analysis then refines and explains the quantitative results by exploring participants' views in more depth (Creswell et al., 2007). One of the strengths of this method is to assess the credibility of inferences obtained from one approach as well as to obtain different views of the same phenomena (Venkatesh et al., 2016). Thus, the research design provides a platform to evaluate the predictive perceived effectiveness of psychometric assessments used at a university career counselling centre and the relevance and perceived effectiveness of the services from the students' perspectives.

Multiple Case study methodology

The study will also use multiple case study methodology. Case study design entails methodological flexibility through the integration of diverse paradigms, study designs, and methods and exploring a contemporary phenomenon in depth within a real-life context (Yin, 2018), especially when the boundaries between phenomenon and context are not evident (Yin, 2003). A case study design is viewed as an adaptable approach when analysing societal and developmental disciplines (Gottfert, 2015). Case studies use multiple sources of data; research can be accomplished by using quantitative and qualitative methodologies. Case study research can employ various data collection processes such as participant observation, document analysis, surveys, questionnaires and interviews (Yin, 2003), and provide an opportunity to get an in-depth understanding of individuals, groups or organizations (Schoch, 2020). The strength of case study research is the ability to use all methodologies within the data collection process and to compare within cases and across cases to enhance research validity (Dooley, 2002). The use of multiple methods to collect and analyse data is encouraged and found to be mutually informative in case study research, where together they provide a synergistic and comprehensive view of the issue being studied (Yin, 2014). The use of multiple sources of data develops converging lines of inquiry, which facilitates triangulation and offers findings that are likely to be much more convincing and accurate (Yin, 2013).

Case study research has grown in reputation as an effective methodology to investigate and understand complex issues in real-world settings (Harrison et al., 2017). Case studies can contain translatable evidence that moves beyond the case itself. Translating case studies can serve broad social functions to describe the values of our society, offer new insights on what has been and should be done, and present new perspectives and interpretations on events (VanWynsberghe & Khan, 2007). Case studies provide a comprehensive understanding of a bounded unit and help with examining the case in order to learn from it. The principles and lessons learned in a case may then be applied to other cases or situations, leading to transferability (applications of aspects of the case to other situations) (Schoch, 2020). Researchers can generate working hypotheses and learn new lessons based on what is uncovered or constructed during the data collection and analysis process in the case study (Eckstein, 2002). The phenomenon under study emerges throughout the course of the study, and it is this surfacing that can bring the study to a natural conclusion (Becker, 2000). In seeking understanding and meaning, as a researcher, I am positioned with participants as a partner in the discovery and generation of knowledge, where both direct interpretations and thematic grouping of findings are obtained (Harrison et al., 2017).

Theory building requires the ongoing comparison of data and theory (Glaser & Strauss, 1967, in Dooley, 2002) and the continuous refinement between theory and practice (Lynham, 2002, in Dooley, 2002). Case study research has the ability to embrace multiple cases, to embrace quantitative and qualitative data, and to embrace multiple research paradigms. Thus, case study research can contribute in a holistic way to all phases of theory development. New theory develops over time as the research is extended from one case to the next and more data are collected and analysed. This form of reiteration and continuous refinement referred to as multiple case studies, occur over an extended period. Only after the researcher has observed similar phenomena in multiple settings will confirmation or disconfirmation of the new theory begin to take shape and gain substance (Dooley, 2002). The researcher is studying multiple cases to understand the differences and the similarities between the cases (Baxter & Jack, 2008; Stake, 1995) and is able to analyse the data both within each case and across cases (Yin, 2003).

Multiple case studies can be used to either illustrate contrasting results for expected reasons or augur similar results in the studies. In this way, the researcher can clarify whether the findings are valuable or not. When the case studies are compared to each other, the researcher also can provide the literature with an important influence from the contrasts and similarities (Vannoni, 2015). A multiple-case study yields more robust and compelling evidence than evidence gathered through a single case; conclusions from multiple cases can be generalized largely than findings from a single case (Yin, 2003). The evidence created from multiple case studies is seen to be stronger and more reliable (Baxter & Jack, 2008), creating a more convincing theory when the suggestions are more intensely grounded in several sources of empirical evidence. Thus, multiple cases allow wider exploring of research questions and theoretical findings (Eisenhardt & Graebner, 2007). This study will employ multiple case studies where a cohort of undergraduate students' career trajectories are observed over the course of undergraduate studies.

Case studies in series, following a group of people who are undergoing the same procedure over time, is appropriate for this study. Tracking changes over time with a few clients is a noteworthy strength, as the researcher can contribute towards an understanding of how, when and for whom interventions works. Here, repeated observation over time will establish the topography of change - before, during and after assessment (Borckardt & Nash, 2002). Moreover, case studies provide a way to identify new models of interventions or adaptations of available methods that are most effective in practice (Drotar, 2011). Case studies provide a distinctive form of practical knowledge that uniquely captures the complexity of naturally occurring phenomena. This is accomplished through being based on multiple sources of information; exploring interactions among different processes or factors; and describing and analysing how processes and events unfold over time. In addition, case studies are well suited to counselling settings, being highly sensitive to context (McLeod, 2013). Case studies examine the influence of contextual factors, in ways that are not possible when large numbers

of participants are being studied (McLeod & Elliott, 2011). This study will also be outcome-oriented, using time-series analysis of data from the outcome of the career assessments and follow-up interviews collected over the course of undergraduate studies, hoping to generate an account of the nature, degree, and persistence of change (if any) that might be attributed to the interventions (Morgan & Morgan, 2009).

A major rationale for using multiple sources of evidence in case study research is to do an in-depth analysis study of a phenomenon in its real-world context. Being both in-depth and contextual, a context that potentially includes events over a period of time means collecting a variety of relevant data and hence relying on multiple sources (Yin, 2018), which is a strength of this study.

Recruitment and Sampling

Zikmund (2000) suggested that a target population consists of a specific or complete grouping of people who are relevant to a research project and the sample size is determined by what the researcher wants to know, the purpose of the research, and what will be credible (Vohra, 2014). A purposive sample adds to or generates new theories by obtaining new insights or fresh perspectives about a phenomenon of interest (Miles & Huberman, 1994, in Collins, 2020). Purposive sampling is a technique whereby the research aim and the researcher's familiarity with the population directs the process (Tansey, 2007). Purposive sampling schemes are employed by the researcher to choose strategically elite cases based on the researcher's perception that the selected cases will yield a depth of information or a unique perspective relative to the research questions (Collins, 2010). The researcher establishes the parameters or boundaries to determine the specific cases that will be assessed or observed, to identify what will be examined in terms of environmental artefacts or individual characteristics. A sampling frame encompassing the theory and research question, guides the design along with the conceptual processes that structure the investigation (Miles & Huberman, 1994, in Collins, 2020).

The participants selected for this study were undergraduate students that have undertaken a career assessment at Rhodes University career centre and received career counselling. The study recruited both males and females aged 18 years or more and strived to ensure a demographically diverse group. Volunteers were sought at their first meeting with the counsellor, where information about the research was explained. Recruitment was not straightforward, the initial recruitment did not yield many participants, and six participants were recruited. A second and third round of recruitment was done, where emails were sent out to

students about the career centre services and study. This was also extended to those Grade 12 learners who made use of the career centre services. This included Grade 12 learners who were enrolled in the “9/10ths” mentoring programme by student volunteers that is run by Rhodes University Community Engagement office, which yielded nine participants. In total, 15 participants were recruited for the study: of the 15 participants, two participants did not complete the steps, therefore the study comprised 13 participants.

Table 1

Demographic overview of participants

No of Participants	Pseudo nym	Age	Sex	Ethnicity (recorded due to SA history)	Home Province	Home Language	Degree
1	Naomi	19	F	Black	Gauteng	IsiXhosa	BSocSc
2	John	19	M	White	Eastern Cape	English	BSc
3	Busi	19	F	Black	Gauteng	isiZulu	BSc
4	Lelo	23	F	Black	Zimbabwe	Shona	BA
5	Li-fen	19	F	Chinese	Gauteng	English	BA
6	Chrystal	19	F	White	KwaZulu-Natal	English	BSocSc
7	Llewellyn	20	M	Indian	Western Cape	English	BSc
8	Faith	22	F	Black	Eastern Cape	IsiXhosa	BSocSc
9	Tamia	20	F	White	Eastern Cape	English	BSc
10	Tobias	21	M	Black	Eastern Cape	IsiXhosa	BSc
11	Thobile	21	F	Black	KwaZulu-Natal	isiZulu	BA
12	Kayla	18	F	Black	Eastern Cape	isiXhosa	Scholar
13	Sideeq	18	M	Coloured	Eastern Cape	Afrikaans	Scholar

The researcher usually works within time and resource constraints, so decisions about sample size must always recognise these boundaries. Morse (2005) posits that the more usable data

are collected from each person, the fewer participants are needed. She invites researchers to take into account parameters, such as the scope of study, the nature of topic (complexity, accessibility), the quality of data, and the study design.

Although there were different groups who were recruited separately, because these groups were small, they have been treated as one sample for data analysis purposes. This decision was supported by the fact that the material generated by these groups had more similarities than differences. Furthermore, in contrast to probability sampling, purposive sampling can occur at the initial stage or at multiple stages within a research study (Collins, 2010). As noted by Yin (2018), multiple-case sampling leads to replication, adds various analytical levels, and increases the researcher's level of confidence pertaining to interpretation of findings.

The sampling process for this study resulted in a small, relatively representative group of students. The participants were from different backgrounds and cultural groups. The group ranged by age (18-23 years), gender, ethnicity, home language, as well as their career interests, registered degrees and faculty. Even though the study sample was small, it was important to recruit a demographically diverse group of participants.

Procedures for data collection

The data collection proceeded in three distinct phases, with participants who volunteer in the first phase, from students who have undergone career assessments at the career centre. Here, individuals completed a career service evaluation questionnaire (see Appendix 7) after undertaking a career assessment. Thereafter, interviews were conducted after a 6-month period with the same students. The third phase commenced at the beginning of their 3rd year of studies, after 18 to 24 months, where the same students were interviewed to follow up and evaluate their progress and gather their perspectives on the career services received. The same individuals were recruited in all phases, because the intent of the design was to follow up the quantitative results and explore the results in more depth (Creswell, 2014), so this research proceeded as a follow-up study over a period of three years.

Below please find an outline of the data collection phases.

Table 2*Data collection phases*

Data collection	Phase 1	Phase 2	Phase 3
Approximate timing	1 st year of study	After 6 months of first contact	18 to 24 months after first follow up in 1 st semester of 3 rd year
Measurement to be used	Psychometric assessment and Career services evaluation Questionnaire	Follow-up Interview	Final follow-up Interview
Participants	Undergraduate and scholar volunteers who received career assessment at the career centre	Same sample	Same sample

Data collection

Multiple data collection techniques were used for this study, which included quantitative data collection in the form 13 participants' career assessments and 15 participants' career services evaluation questionnaires, and qualitative data collection in the form of 13 transcribed follow up interviews. Several data sets were collected, as described in the following.

Career assessment measures

The purpose of career assessment may be regarded as the enhancement of self-awareness. Career counsellors are encouraged to tailor their assessment and interventions according to what is best for the client, and not to that with which they are most comfortable. Super (1990) described a model for developmental career counselling assessments which consist of four stages namely: preview, depth-view, assessment of all the data, and counselling. The career counselling assessment used in this study included a process where the counsellor assessed the client's values, career adaptability, abilities, personality and interest; in order to understand the participant's position in terms of their career decision-making process and to address their career related needs (De Bruin & De Bruin, 2013). Validated assessment measures were used for this study, which include the assessment of values, personality and career interests for students. An assessment measure of abilities was added to the assessment battery for scholars, to assess scholars' higher learning proficiency. The list of career assessment

measures described below form part of the career assessment battery used at Rhodes university career centre with the exception of the SACII, which was included for this study. Because the quantitative element was not a central part of the findings, details of tests for example, factor structure, internal consistency, Cronbach alpha coefficients, or invariance testing are not listed in this section.

Career Interest Assessment

South African Career Interest Inventory (SACII)

The SACII is an emic South African developed interest inventory designed to measure Holland's (1997) six vocational personality types: Realistic, Investigative, Artistic, Social, Enterprising, and Conventional (RIASEC). Morgan et al. (2014) investigated the validity of Holland's circular/hexagon structure in SA with the SACII and found satisfactory fit for Black, Coloured, Indian/Asian and White university students and working adults. The result of this study indicated that Holland's circular/hexagon model may be applicable to the SA context and that career assessment and counselling based on the model may proceed if valid interest inventories are used. This study used the original 142-item version of the SACII. Several studies have supported the psychometric properties of the original version of the SACII in South Africa (see Morgan et al., 2015a; Rabie & Naidoo, 2019; Van Vuuren, 2022). The SACII is available in three SA languages, confirming the validity of the English, Afrikaans and the IsiXhosa versions of the SACII for use within a diverse SA context (Rabie, 2019). Further development and validity of the SACII is seen in the development of the SACII-short (Morgan & De Bruin, 2019; Morgan, 2022).

Occupational Interest Profile (OIP)

The OIP is partially based on the pioneering work of John Holland (1997) in the area of general career themes. The OIP is an online tool designed for use in SA, as part of personality characteristics, which assesses how well-suited individuals are to different environments. Personal qualities and career interests are presented in the assessment. Seven career interests are identified namely; Artistic, Practical, Scientific, Administrative, Nurturing, Logical and Persuasive interest (Psytech International Limited, 2007). In my experience as a psychologist who has been using this assessment, the OIP has been helpful in identifying the two most dominant career interest for clients. This process of narrowing the seven fields of interest to two main interest fields provides an opportunity for clients to reflect on their dominant career interests. It provides information for further discussion by identifying career interests, what clients value at work and what type of work environments they prefer.

Career Interest Profile (CIP)

The CIP has been designed for South African clients of all ages. It assists with identifying the interest, career preferences and dislikes that provides the counsellor with objective and subjective information that can be discussed with the client during career counselling (Maree, 2010b). The paper-based CIP third edition (2010) was used for this study. The CIP questions

promote reflexivity, to develop the processes of narration to facilitate the clarification and construction of career-life stories. Career counselling that includes the use of the CIP assists clients with self-reflection and increases their career options (Maree, 2022). It helps individuals who are struggling with career indecision to revisit their stifled dreams and plans and assists others with their decision-making challenges (Maree, 2020). The Interest Profile continues to be adapted for use in practice, as in the recent CIP, Version 6 (Maree, 2017b).

Personality Assessment:

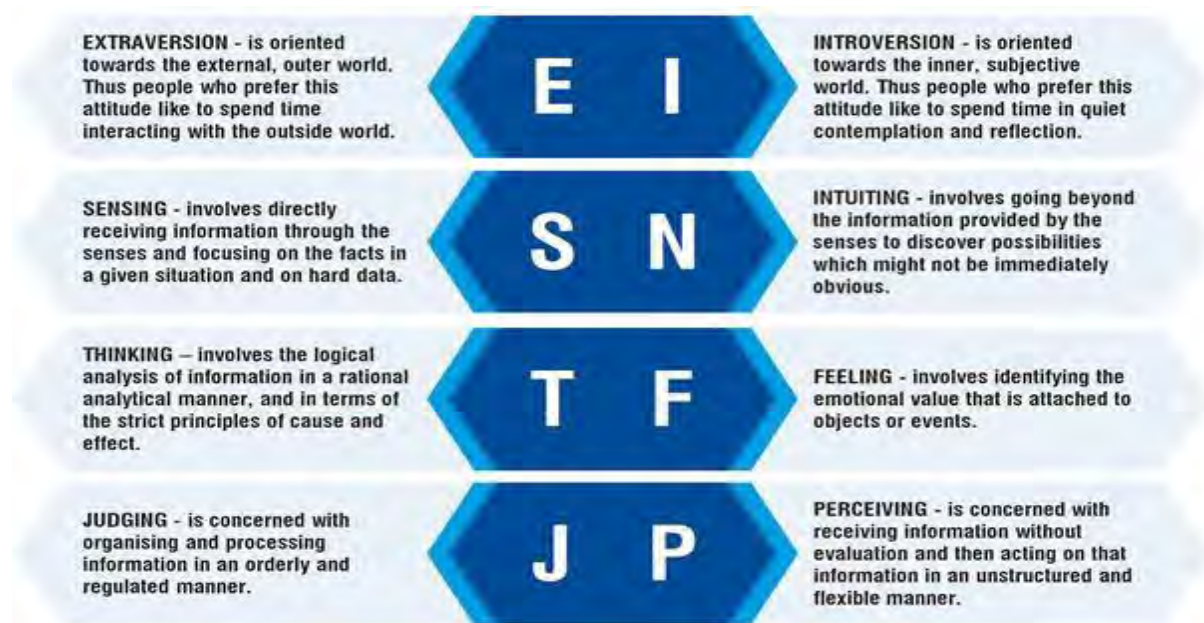
Jung Type Indicator (JTI)

The JTI is a questionnaire designed to assess a person's preferences along the four dimensions of Extraversion-Introversion, Sensing – Intuition, Thinking – Feeling and Judging – Perception (Psytech International Limited, 2007). The JTI is rooted in Jung's psychological theory (Jung, 1921) and has been developed using modern psychometric techniques, to ensure that the questionnaire provides a reliable and valid measure of a person's Jungian (psychological) type. The JTI also incorporates some of the modifications to Jung's theory suggested by Elisabeth Myers (1962), which were included in the Meyers-Briggs Type Indicator (MBTI; Myers & McCuall, 1985). Research supports the psychometric validity of the MBTI in SA context (Van Zyl & Taylor, 2021). Unlike the MBTI, the JTI views the two basic attitudes (Extraversion versus Introversion), the four psychological functions (Thinking versus Feeling and Sensing versus Intuiting) and the two secondary processes (Judging versus Perceiving) as being continuous variables, rather than discrete (JTI technical manual 2010). Developers of the instrument noted that correlations with other measures support the construct validity of the JTI (Psytech, 2010). The JTI has been applied in SA context and is recommended since it provides a full report which provides a description of the personality type of the individual (Denton, 2012; Ghidella, 2017; Grobler, 2008; Marais-Potgieter & Thatcher, 2020).

The JTI personality preferences are represented in Table 3 below. From knowing these preferences, it is possible to anticipate how a person will normally prefer to act in a variety of situations. It is also possible to anticipate how a person will typically prefer to approach many aspects of his/her work situation. A person's JTI profile can often be categorised within one of the 16 basic JTI types. A description of each of these 16 types is provided on the website www.jungtype.com

Table 3

JTI personality preferences (an excerpt from Psytech, 2007)



Values Assessment:

Value and Motives Inventory (VMI)

The VMI profiles a person's motivations to determine the amount of energy and effort they are likely to expend in different activities. The VMI measures occupationally relevant values under three main categories. These are 1.) Interpersonal (Values which influence an Individual's approach to relationships with others). 2.) Extrinsic (Values that influence behaviour in the workplace). 3.) Intrinsic (Values relating to personal beliefs and attitudes which guide an individual's approach to everyday problems) (Psytech International Limited, 2007). In my experience as a psychologist using this assessment, it provides a holistic picture of the client's values, which aid in the career-decision making process. It increases clients' awareness of their values, bringing these to the fore. Having this information as part of the career counselling discussion allows clients to reflect on what is important to them, which provides further career guidance and aid in career decision-making.

Table 4 represents the three main value scales namely, interpersonal, extrinsic and intrinsic values and the sub values under each value domain contained within the VMI.

Table 4

VMI values (an excerpt from Psytech, 2007)



Aptitude Assessment

General Reasoning Test (GRT)

The GRT2 is a test designed to assess general reasoning ability across three domains, namely verbal, numerical and reasoning ability. The verbal reasoning test assesses the ability to perceive and understand ideas and concepts that are expressed verbally in a logical manner. It is recognised that verbal reasoning test scores are influenced by educational experience. The numerical reasoning test assesses the ability to understand and use numerical concepts and numbers in a logical and rational manner and to do numerical computation. The abstract reasoning test assesses the ability to understand new concepts and ideas that have not been previously experienced. It can provide an indication of educational potential as it does not depend on educational achievement to determine a correct response (Psytech International Limited, 2007). Studies on the GRT2 suggest its usefulness in career counselling in SA context (Grobler, 2008).

Career services evaluation questionnaires

After obtaining career assessment feedback, participants completed a career services evaluation questionnaire aimed at evaluating the career counselling services received from the centre (see Appendix 7). Although no questionnaire could be found that had been validated or tested within the specific context of this study, the chosen questionnaire had been tested within similar contexts at a European university, to evaluate counselling services. The 15-item career services evaluation questionnaire was adopted from the "Satisfaction with the Intervention" (SWI) questionnaire (Masdonati et al., 2009), specifically developed for evaluating the quality of the counselling centre services at the University of Lausanne. The questionnaire was in French and was translated into English (see Appendix 6) and adapted for the use of this study. An exchange student whose home language is French and a lecturer who teaches French and has good command of both languages did the translation. The questions

concerned several aspects of the career services such as: the quality of the admission process, the counselling session, the career assessment measures, written feedback provided, insight obtained from the services, a broad overview and opinions about the career services. Participants were asked to rate the quality of the career assessment services using a 5-point Likert-type scale ranging from Strongly Agree to Strongly Disagree to enable scores of either low or high values to represent the opinion, evaluation, and experience of participants. Scholars and researchers are unanimous in their view that the Likert rating scale is particularly useful for the purpose of evaluation of data, and is a frequently used psychometric tool in educational and social sciences research (Joshi et al., 2015). The questionnaire includes open-ended reflection questions (see Appendix 7). This provided an opportunity for more objective feedback from participants to reflect more openly about the assessment process and services and therefore perhaps led to a more accurate evaluation of the service provided by the centre. The questionnaire also provides a triangulation point for the various narrative data from interviews with participants.

Follow up interviews

Information was gathered using one-on-one interviews, six to eight months after the career assessment feedback session (see Appendix 8). Qualitative interviews allow people to freely present, their life situations in their own words (Kvale, 2006). The idea was to explain the outcomes of the career assessment, and to probe the usefulness of psychometric findings and the students' perceptions of what is helpful in more depth, a key strength of this design. This approach enables the gaining of a more holistic evaluation of the entire assessment process (Donald et al., 2014). The outcomes of the first assessment phase would inform the type of qualitative follow-up questions in phase 2 and 3 (Creswell, 2014).

All participants were asked to indicate a time and date that was most convenient for them, so that they could relax during the interview, to encourage maximum involvement and interaction that would facilitate a more open and rich conversation. The researcher built some rapport with all the participants prior to interviewing them, through the career guidance, career assessment, and career evaluation questionnaire during the recruitment process and in phase 1 of the data collection process. Semi-structured and open-ended questions were used to gather meaningful data. Semi-structured interviews are a flexible method that seeks to obtain descriptions of the life world of the interviewee; being open to changes of sequence and forms of questions, in order to follow up on the specific answers given and the stories told by participants (Kvale, 2015). Interviews were audio-recorded using digital means, which freed the interviewer to concentrate on the topic and the dynamics of the interview, hoping to collect accurate information.

All interviews were manually transcribed by the researcher to further immerse herself in the data (Braun & Clarke, 2006). The transcription of this research was done verbatim. Precision in description and stringency in meaning interpretation corresponds to exactness in quantitative measures (Brinkmann & Kvale, 2018). To ensure that the information was captured while it was still fresh in the researcher's mind, all interviews were transcribed within 48 hours of the interview, to avoid the researcher's dependency on memory, and to ensure that useful information was not lost (Burns & Grove, 2010). The play-script style (Wiggins, 2017) was used for transcribing the interviews; with a focus on nuanced descriptions that depict the qualitative diversity of participants' lived experiences (Brinkmann & Kvale, 2018).

Final follow-up interviews

The third phase took place after a period of 18 to 24 months, at the beginning of their third year where the same participants were interviewed, to follow up and evaluate their progress and the career services received (see Appendix 9). The intent was to follow up the quantitative results and explore the results in more depth (Creswell, 2014), to gain an indication of the perceived effectiveness of tests used, and to ascertain the influences that impact participants' career decision-making over the course of undergraduate studies. This method provides depth and detail offered by quantitative data and qualitative interviews in a longitudinal context when following participants through time; it provides a way into uncovering complex processes of causality (Edwards & Holland, 2013). Data saturation is achieved when further interviewing fails to present new information and merely replicates the data that was collected already (Burns & Grove, 2010). The number of interviews conducted depended on how soon data saturation was achieved. Follow-up questions were asked to gather a richer understanding of the participant's experiences and career trajectory. These interviews also provided participants with an opportunity for further career guidance with the researcher.

Due to my position as an employee, manager and psychologist of the career centre at the start of this project, interviewees may have initially been wary of being comfortable and completely open in their responses. I was mindful of this and had to guard the way I phrased questions and the tone that was used to ensure that participants felt comfortable and could express themselves freely. To try to mitigate against this at the onset, I assured the participants that this research was conducted independently as a PhD student in the Psychology department and that information shared would not jeopardise their relationship with the centre or access thereof. Interviewees may sometimes tend to give positive responses, not always painting the whole picture (McNeill & Chapman, 2005). Therefore, I reassured participants that they could be fully honest and need not think that I only wanted to hear positive things. I emphasised that being honest meant that information obtained from the study would potentially aid in providing optimal and better-tailored services to students, and assured them that confidentiality would be maintained. As a psychologist and researcher, I hoped to establish a trusting relationship with the research participants in order to ensure that conflicts of interest did not arise (Allan,

2016; Fisher & Anushko, 2008), to encourage participants to feel more comfortable to be honest and critically reflect on the assessment services and their experiences at this stage of their career trajectories. Although at the time of conducting this research in phase 1, I was an employee at the career centre, this research was conducted independently and I guarded against any conflict of interest that might have arisen.

Data analyses

The quantitative and the qualitative data were analysed separately.

Quantitative Data Analysis

Descriptive statistical techniques were applied to organise, analyse and interpret the quantitative data. The quantitative data of the evaluation questionnaire have been collated and analysed with the Statistical Package for the Social Sciences (SPSS) software programme version 24, to produce descriptive and inferential statistics. Descriptive research may include case studies, cross-sectional studies or longitudinal investigation. The primary goal is to describe the sample at any specific point in time without trying to make inferences or causal statements. Descriptive studies help in identifying patterns and relationships that might otherwise go unnoticed (Pallant, 2007; Verma, 2012). Descriptive analysis was used to describe the characteristics of the participants and to identify participants' reflections and evaluation of the career counselling and career assessment services. Due to the sample size of the study, these results cannot be reviewed in isolation and have been used in conjunction with the more subjective case study narrative data from follow-up interviews. Findings from the descriptive data will be discussed and interpreted in chapter 6.

Qualitative data analysis

The best preparation for conducting case study analysis is to have a general analytic strategy (Yin, 2003). Data analysis in case study research entails presenting a detailed description of the setting of the case, and the case itself (Creswell, 2007). A detailed description of each case vignette is presented in chapter 5. Themes within the cases, called a within-case analysis are presented in Chapter 7 of this study. The within-case analysis is followed by a thematic analysis across the cases, referred to as cross-case analysis or cross-case synthesis (Yin, 2009).

Thematic analysis

The qualitative data were analysed using thematic analysis (TA). Through its theoretical freedom, TA provides a rich and detailed account of data. It is a method for identifying, analysing, and reporting patterns (themes) within data and interprets various aspects of the

research topic. As an essentialist or realist method, participants' experiences, meanings, and perceptions of their realities can be obtained. As a constructionist method, it can examine the ways in which events, realities, meanings, experiences affect a range of discourses that operate within society. It can also be a contextualised method, which acknowledges the ways individuals make meaning of their experiences and how the broader social context impinges on those meanings (Braun & Clarke, 2006). TA provides a robust, systematic (identifying / analysing / reporting) framework for coding qualitative data, and for using that coding to identify patterns (or themes) across the data set in relation to the research question: it is thus useful for the practice arena (Braun & Clarke, 2014).

Themes or patterns can be identified in an inductive or "bottom-up" way, a process of coding the data without trying to fit it into a pre-existing coding frame. Themes may be identified in a theoretical, "top-down" way, driven by the researcher's theoretical or analytic interest in the research area. In this study, TA incorporated data coding for a specific research question, which maps onto the more theoretical approach. Inductive coding on the other hand allowed themes to emerge directly from the data (Braun & Clarke, 2006).

Analysis for this research followed a semantic approach, where themes were identified within the explicit or surface meanings of the data, where the researcher is not looking for anything beyond what a participant has said or what has been written. In this case, the analytic process involved a progression from the description, where the data was organized to show patterns in semantic content and summarized, to interpretation, where there was an attempt to make sense of the significance of the identified patterns and their broader meanings and implications (Braun & Clarke, 2006).

Analysis for this research followed Braun and Clarke's (2006) six phases of thematic analysis, which are regarded as a foundational to analysis in qualitative research. These six phases are described below as: familiarising yourself with the data, generating initial codes, searching for themes, reviewing themes, defining, and naming themes, and producing the report.

Phase 1: Familiarising yourself with your data

It is important to immerse oneself in the data to the extent that one is familiar with the depth and breadth of the content. I transcribed all the interviews on my own, and checked the transcripts back against the original audio recordings for accuracy. This meant that I had collected the data through interactive means and would be more likely to engage in the analysis with prior knowledge of the data, with some initial analytic interests or thoughts (Braun & Clarke, 2006). Immersion in the data involved repeated reading of the data, and reading the data in an active way, searching for meanings and patterns. It was also ideal to read the entire

data set at least once before one begins coding, as ideas and identification of possible patterns would be shaped through such reading (Braun & Clarke, 2006).

Writing is an integral part of the analysis; therefore, writing began in phase one, with the jotting down of ideas and potential coding schemes, and continued right through the entire coding and analysis process (Braun & Clark, 2006). During this process, codes were being identified, either as exact words used by participants (in vivo codes), or code names that the researcher felt best fitted the description.

Phase 2: Generating initial codes

This phase involved identifying and coding interesting parts of the data in a systematic way across the entire data set. Here, one works systematically through the entire data set, giving full and equal attention to each data item, and identifying interesting aspects in the data that may form the basis of repeated patterns (themes) across the data set (Braun & Clarke, 2006). Coding was done manually in a word document and by means of highlighted and coloured text.

Phase 3: Searching for themes

This phase, involved sorting the different codes into potential themes, and collating all the relevant coded data extracts within identified themes. Here, the researcher starts to analyse their codes and considers how different codes may combine to form overarching themes (Braun & Clarke, 2006). Themes are presented in a hierarchical list where the order is determined by the relevance in relation to the research question.

Phase 4: Reviewing themes

This phase involved two levels of reviewing and refining themes. First, one needs to read all the collated extracts for each theme, to consider whether they appear to form a coherent pattern. This means checking to see if the themes work in relation to the coded extracts and the entire data set. The second level involved a similar process, where the researcher considered the validity of individual themes in relation to the data set, and whether the thematic map accurately reflected the meanings evident in the data set as a whole. At the end of this phase, I had a clear picture of what the different themes are, how they fitted together, and the overall story they could tell about the data (Braun & Clarke, 2006).

Phase 5: Defining and naming themes

Phase 5 is about further refining and defining the themes to be presented for the analysis and further analysing the data within each. This means identifying the essence of what each theme is about, and determining what aspect of the data each theme captured. It is important to consider how each theme fits into the broader overall story of the data, in relation to the

research question or questions, to ensure there is not too much overlap between themes. As part of this, one generates clear definitions and names for each theme. The names of the themes need to give the reader a clear indication of what the theme is about (Braun & Clarke, 2006).

Phase 6: Producing the report

It is important that the final analysis write-up, including data extracts, provided a concise, coherent, logical, non-repetitive, and interesting account of the story told by the data, within and across themes. Extracts needed to be embedded within analytic narratives that go beyond the description of the data and make an argument in relation to the research questions (Braun & Clarke, 2006).

Selecting an appropriate comparative structure for a multiple-case study depends on the purpose of the study and the prominence it affords to individual cases (Rule & John, 2011, Yin, 2018). Eisenhardt (1989) suggests two stages for data analysis, the analysis within case data and searching for cross-case patterns. Thematic and synthesised structures place great emphasis on cross-case similarities and differences. The purpose of case studies here is to illuminate the cross-case themes, where the individual cases have less prominence as single phenomena (Rule & John, 2011). A strategy that was employed in this study is cross-case analysis; this is used specifically for analysing multiple case studies (Creswell, 2007). With this technique, each case is treated individually, as a separate study (Yin, 2009). The goal is to retain the integrity of the entire case and then to compare or synthesize any within-case patterns across the cases. In this sense, cross-case synthesis strives to retain the holistic feature about the cases (Yin, 2018).

Although the qualitative and quantitative data sets have been analysed separately, findings from the two sets will be discussed and interpreted together in chapter 8, to compare and triangulate the data.

Ethical considerations

Rigour and creativity characterise the treatment of data, while ethics and professionalism guide our interaction with people. Quality in research is not only about collecting, analysing and interpreting data, it is also about people and relationships; high quality research excels in both aspects. Trustworthiness is an alternative to reliability and validity. The concept promotes values such as scholarly rigour, transparency and professional ethics, to gain trust and fidelity within the research community (Rule & John, 2011). Guba (1981) suggests that trustworthiness is achieved by giving attention to transferability, credibility, dependability and confirmability.

Transferability has emerged as an alternative to generalisability or external validity (Rule & John, 2011). Reader-determined transferability holds that the researcher of the case study understands best the phenomenon within its context. The researcher's prior involvement at the career centre facilitated credibility and access to the context of this study. By providing thick descriptions of the case and its context, the researcher allows her findings and conclusions to gain a level of transferability that the reader may determine (Rule & John, 2011). Yin (2003) notes that the goal of a case study is to expand and generalize theories, "analytic generalisation" in which a previously developed theory is used as a template with which to compare the empirical results of the case study. This study will employ the application of the Vondracek et al.'s (1986) DCF of career development and the LSVD of Vondracek et al.'s (2014) framework.

Credibility refers to the extent to which a case study has recorded the fullness and essence of a case reality (Bless et al., 2013). Credibility reflects the extent to which a study measures what it set out to study. In this case, I have reviewed and analysed the data with specific questions in mind and specifically looked for data that would contribute to and related to these questions. The research questions were asked explicitly throughout the study, ensuring that there would be data that could be collated in relation to the questions. This could be seen to be manipulating the data in order to serve the researcher's objectives and it has been structured in such a way to ensure the researcher's questions are explicitly answered. Every effort has, however been made to ensure that those answers have not been unduly influenced by the researcher's agenda.

Dependability (a form of reliability) focuses on methodological rigour and coherence towards generating findings and case accounts that will be accepted with confidence in the research community (Rule & John, 2011). A major strength of case study data collection is the opportunity to use many different sources of evidence (Yin, 2018). The use of multiple data collection sources, makes the study more convincing and accurate, enhances case study reliability (Ridder, 2017). In a multiple case study, the use of several relevant data sources is a vital approach to achieve conclusive findings and ensure the study's reliability and validity. The higher the levels of validity, credibility, and reliability, the more trustworthy a study is, and future researchers can use the findings as a basis for their related studies (Yin, 2018).

Triangulation in case study research ensures that one achieves research that is of high quality, rigorous and rich (Yin, 2018). Triangulation refers to the process of using multiple sources or methods to support findings or propositions generated in the case study. A multiplicity of research methods used in this study strengthens the truthfulness (validity) of findings by eliminating bias or inaccuracy from reliance on a single source or method (Rule & John, 2011).

Triangulation is a means for confirming the reliability of the data collected during the interviews by comparing the data with other sources. Triangulation ensures that the case study had rendered the participant's perspective accurately. This means that at minimum, the researcher would have questioned the same participants several times or on several occasions, which may serve as a way of multiple sources, and the possibility of multiple realities (Yin, 2018).

Confirmability is a way of addressing concerns about the researcher's influences and biases on the study. Full disclosure of the research process, including limitations, research positionality, and ethical requirements, helps to ensure the dependability and confirmability of a case study (Rule & John, 2011).

Researcher positionality

It is important to be constantly aware of how one's position in relation to the study context and participants may influence the study and its overall quality. Researcher status and authority may influence the data being generated. This study placed me in a binary role of being both service provider (psychologist at the centre) and researcher, which could be said to introduce a conflict in roles and ethics. I had to be sensitive to how my status, power, and relationships may impact on the study and had to plan to minimise such influences to help improve the quality of the study. From an interpersonal and relational perspective, I needed to build trust and ensure that interpersonal ethics were upheld. Being transparent about one's positionality and its possible effects contribute to the credibility and confirmability of the study (Rule & John, 2011). Due to my positionality, it was important to have ongoing ethical awareness. To try and mitigate my own subjectivity and bias, I had to take on a curious stance, a collaborative approach that implied learning with and about participants. This builds trust, creating a safe space for interaction, sets boundaries, responsibilities and fosters a sense of exploring and unpacking understanding (Akhurst et al., 2018). In addition, as an employee in the RUCC office, interviewees may have initially been wary of being completely open and they might also have wanted to please me. To try and mitigate against this at the onset I assured the participants that this research was not being conducted on behalf of RUCC, however instead I was conducting it independently as a PhD student in the Psychology Department. I also assured them that whatever they said would not jeopardise their relationship with and access to services with RUCC.

This chapter has described the methods that were used in undertaking this research, as well as key ethical considerations for this study. The findings in the following chapter are introduced through case vignettes, providing descriptive information of each participant, their position in terms of their career decision making process, the career assessments used to assist with their career-related needs, the outcomes of the career assessment, and how each participant's career trajectory unfolded over the course of undergraduate studies.

Chapter 5: Vignettes

The following thirteen vignettes are summaries intended to give the reader a sense of each participant; providing brief and relevant background information and reasons for seeking assistance. The vignettes then include the assessment results, a summary of these, recommendations and a reflection on the follow-up interviews that took place after the career assessments. Each of the tests and the interpretations derived from the career assessments were conducted in the career centre.

The participants' own words are used to illustrate points where appropriate and these are noted in italics. Each vignette is titled by the participants' pseudonym. Each vignette begins with an excerpt that seems to best capture the reason for and value of an assessment for each participant. The excerpts are written in the participants' own words and were derived from text; thus, their own grammar and spelling are also used. The chapter ends with differences and similarities that emerged from the sample of career assessments by looking at differences and similarities in degrees and results of career inventories.

Vignette 1: Naomi

"What do I do with my degree, with both majors? I need help with a broader view.... What are the options or possibilities? Where can I find employment with my majors? What are the alternative plans when my degree fails me?"

Naomi is a nineteen-year-old amaXhosa female student from Johannesburg who resides at the university campus. She enrolled in a first-year Bachelor of Social Sciences and selected Psychology and Human Kinetics and Ergonomics as her majors.

Reason for referral

Naomi came to the career centre because she was uncertain about her majors and wanted to do a career assessment to confirm if her personality and strengths are best suited for her current majors and career direction. She also wanted to know what various career opportunities were available with the current majors she selected. In her first year, she selected Psychology and Human Kinetics and Ergonomics (HKE) as her two majors with Anthropology as a minor. In response to the question on the Intake form: What are your plans/career directions for your degree at present? Naomi's response was *"Looking forward to majoring in both Psychology and HKE to work as a trainer for a sports team or a psychologist at Rehabilitation centres"*.

Background Information

Naomi reports that she is staying on campus in the university residence and is enjoying her stay thus far. She further reports that she feels welcomed at Rhodes University and that everyone is very friendly and approachable. She is looking forward to her studies and the many opportunities this university has to offer to students. In her leisure time, Naomi watches series and movies and loves to write music or plays. She also likes to exercise and is a member of the Rhodes Health Suite (gym) which she attends regularly.

Naomi's mother is an Educator. Naomi has three siblings; her eldest sister is 28 years old and is a Journalist (senior writer). Her middle sister is 25 years old and is an HR (Human Resources) consultant and her younger sibling is 20 years old and is a culinary student. She reports that they are all supportive of one another and that they maintain good relationships within the family unit.

Results

Naomi engaged well with the assessment. She was friendly and presented as an intelligent individual. In response to the question on the assessment answer sheet: What is the purpose of testing? Naomi responded as follows *"To find out which career path to take based on my personality and strength"*.

SACII

Naomi's three-letter code generated by the SACII were ASE, highlighting that her interests lie in occupations related to the broad categories of Artistic, Social and Enterprising interest fields. The Occupational Finder suggest the following careers, Teacher, Public-Relations Representative, Production Manager, Supervisor and Playwright.

OIP

Career interest description	very low	Low	medium	high	very high
Artistic				X	
Practical		X			
Scientific		X			
Administrative	X				
Nurturing			X		
Logical		X			
Persuasive			X		

Naomi's profile suggests a dominant interest in the Artistic field (activities involving creative/artistic skills). This is followed by the Nurturing interest fields as well as Persuasive fields.

Personal work need	1	2	3	4	5	6	7	8	9
need for excitement					X				
need for stability					X				
need for change			X						
need for people					X				
need for control					X				

Naomi's personal work needs seem somewhat undifferentiated, and might indicate career adaptability still developing and that she might benefit from work experience to assist in this regard. Interpersonal style: Naomi is assertive but is unlikely to force her views onto other people. In general, she will try to avoid conflicts and disagreements. Naomi is sociable and friendly and will prefer to work with others, rather than having to work on her own all the time. Additionally, the test results suggest that there is some interest in looking for a job that gives some management responsibilities. Thinking Style: The results suggest that Naomi prefers to work in a step by step way, with clearly set guidelines and rules to follow and has a balanced approach towards taking risks. She is less attracted to very unstable careers because of the risks involved and would prefer to work in a fairly large organization with a clear career structure. Coping style: Naomi is not a particularly touchy or moody person. She might be inclined to worry a little, but she will generally be fairly secure and self-confident and should be able to cope reasonably well with the normal pressures and demands of life.

Jung Type Indicator (JTI)

	1	2	3	4	5	6	7	8	9	10	
Extraversion						X					Introversion
Sensing					X						Intuition
Thinking							X				Feeling
Judging				X							Perceiving

The JTI scores show features of each of the type categories ENFJ, ESFJ, INFJ and ISFJ, therefore showing a balance on each of the aspects of personality. Naomi's score on the Extraversion-Introversion dimension shows more or less equal tendencies in each direction. This might indicate undifferentiated self-knowledge. The Sensing – Intuition score also indicates equal tendencies towards both. This might further suggest that she does not know herself well enough. On Thinking – Feeling, Naomi's score was more towards feeling. This means that subjectivity will influence her decision-making more rather than logic. Naomi's score for Judging – Perceiving slightly towards Judging. Planning in detail is of slightly more importance to her to achieve her objectives. When taking on a project, she will ensure that each stage has been carefully considered.

Values and Motives Indicator (VMI)

Interpersonal Values: The results suggest that Naomi rates Altruism, Affection as of low importance to her. Her need for Affiliation is moderate and while she will enjoy some companionship, she does not rate this as a strong driver. Extrinsic Values: Achievement is highly important to her and she gains satisfaction from succeeding in challenging tasks. Financial reward and Economic status are of moderate importance. Intrinsic Values: Not being preoccupied with any fundamental set of moral principles, Naomi will be more inclined to view her own and others' behaviour in light of the circumstances at the time. She is concerned about the abuse of power by those in authority and will expect people to be made accountable for their actions.

Summary

Both career interest inventories, the SACII and the OIP identify career interests in Nurturing and Social fields. Careers with artistic features are also identified in both interest inventories, highlighting her interest in activities involving creative/artistic skills. Naomi's decision to major in Psychology and Human Kinetics and Ergonomics (HKE) is supported by the assessment results. A major in Psychology is supported by a career interest in Nurturing and Social interest fields. A major in HKE seems to also be supported by her career interests. Additionally, she expressed interest to work as a trainer for a sports team, being a physiotherapist or working within a rehabilitation centre are supported. Career interests in the Artistic field correlate with Naomi's leisure activities where she writes music and plays. Naomi's strengths will lie in her ability as an organizer and her concern for people, where she brings a sense of responsibility to what she does. Affiliation, Achievement, Independence and Ethics are important values to her. These test results show that Naomi appears to be doing courses that lead her in the direction of a career that she will find fulfilling and which will align with her interest and abilities.

Recommendations

Naomi would benefit from further information gathering in her interest fields (Psychology, HKE and Physiotherapy) and needs to further explore how her current courses and future possibilities might lead towards such careers. Her interests in the Artistic field highlighted by the OIP as an area to further explore and perhaps integrate with her course and career.

Follow-up interviews

During the 6 months follow-up that took place mid-year in her second year of undergraduate studies, Naomi reported that she continued with a BSocSc with Organizational Psychology and HKE as her two major subjects. She expressed her appreciation for the career counselling and career assessment process and reported that it was very helpful. She reported that reading up on her majors and doing some research helped her gain an understanding of her career interests and assisted her in affirming that she is pursuing a degree aligned with these.

Another follow-up took place after 18 months, at the end of her final year. Naomi reported that she was enjoying the content of her studies in the degree and has decided to lean more towards Organizational Psychology, in which she would like to pursue an honours degree, but does not have the funds to do so. She is currently looking for employment in Human Resources because she reports enjoying this aspect and that this resonates with her interests in working with people. The follow-up session focused on the various job platforms to explore and to register with. We also updated her LinkedIn profile, to set it up for potential recruiters to notice her.

Vignette 2: John

"I am here to get an idea of a career path to follow as I am very unsure. My current plan is to finish the year and to go to a university that offers an engineering field"

John is a nineteen-year-old white English-speaking male who resides in Makhanda. He has a keen interest in mathematics and science and has enrolled in a first-year Bachelor of Science degree.

Reason for referral

John came to the career centre because he was uncertain if he had made the right choice if he had selected a suitable career path. He was uncertain of what he wants for his future, finding it difficult to articulate his various interests, aspects of his personality and values; and that he did not know himself well enough to make informed decisions. We decided upon a career assessment in addition to other interventions. In response to the question on the Intake

form: What are your plans/career directions for your degree at present? John's response was *"To finish the year and move to a university that has an engineering degree"*.

Background Information

John, a local from Makhanda, did very well at school and was accepted into the BSc degree. He reported that he does find BSc interesting, as he can continue with mathematics and physics and has since developed an interest in Geology and Economics in the second semester of first year. In his leisure time, John likes fishing, baking and goes to the gym regularly. John's mother is a teacher, his father is an assistant to the headmaster. He has an older brother who is a mechanical engineer in the South Africa Police Services. He reports good family relationships.

Results

John was generally quiet and not particularly talkative. He engaged well with the assessment and asked questions when he needed assistance. In response to the question on the assessment answer sheet: What is the purpose of testing? John responded as follows *"To get an idea of a career path to follow as I am very unsure"*.

SACII

John's three-letter code is RCE, highlighting interest in Realistic, Conventional and Enterprising. The following careers were suggested: Water Treatment Plant Operator, Surveyor, Engine Mechanic Stock clerk and a Procurement official.

OIP

Career interest description	very low	low	medium	High	very high
Artistic		X			
Practical					X
Scientific				X	
Administrative			X		
Nurturing		X			
Logical		X			
Persuasive			X		

The very high interest in the Practical field, points to activities involving engineering, machine tools and the use of machinery. The test scores in Practical and mechanical careers show a very high interest in how things work and that John will probably achieve a sense of satisfaction from making and mending things. The second-highest career interest area is Scientific, involving the understanding of natural and physical phenomena.

Personal work need	1	2	3	4	5	6	7	8	9
need for excitement				X					
need for stability					X				
need for change						X			
need for people		X							
need for control		X							

Interpersonal style: John seems understanding, considerate and dislikes disagreements. He tends to focus on finding a solution and prefers not to take the lead except in rare situations. He enjoys working on his own, away from distractions and people and is likely to seek out a job that allows him to work on his own or with one or two people. Thinking style: John understands the importance of planning and is open to new ideas. He would take risks if the benefits are great, but prefers a stable job with a clear career path. Coping style: John appears secure and self-confident and can cope reasonably well with normal pressure and demands. He would find it difficult to concentrate in very noisy surroundings.

JTI

	1	2	3	4	5	6	7	8	9	10	
Extraversion							X				Introversion
Sensing					X						Intuition
Thinking				X							Feeling
Judging						X					Perceiving

The JTI dimensions showed features of each of the type categories ISTJ, ISTP, INTJ and INTP.

On Extraversion- Introversion, the score leans more towards Introversion. This indicates that he will prefer to spend time on his own but might enjoy some social contact with others. He is likely to prefer work that requires thought and reflection and it is through thinking that he would prefer to make contributions, rather than with actions. John's Sensing – Intuition score shows more or less equal tendencies. This suggests a good balance between attention to detail and concern with abstract features of a situation. He will be confident with working at a conceptual

level but will also be able to deal with concrete issues. In the Thinking – Feeling dimension, John's score is somewhat towards Thinking. This means that analysis will be more important to him and he will try to approach most situations with a logical perspective. On Judging – Perceiving, John's score shows equal tendencies. He is likely to value structure and organization, but not to the extent where he will sacrifice spontaneity and flexibility, if needed.

VMI

Interpersonal Values: The results of the questionnaire suggest that John rates Altruism, Affection and Affiliation as of low importance. Extrinsic Values: John places low emphasis on Achievement, Security and Aesthetic values, but high value on Economic status and wealth. Intrinsic Values: A high score on independence suggests that he will stand up for his views regardless of what others might think and his Ethical values score suggests that John would be reluctant to accept a totally scientific explanation of the world. John's average score on Moral values suggest that he would be more inclined to view people's behaviour in the light of the circumstances at the time. A low score on Traditional values suggests that John might be more inclined to challenge authority, believing that changes to existing laws and rules are possible.

Summary

John can be described as an Introverted, thinking individual, who perceives information through a balance of both intuition and accurate facts. He values Economic status and wealth, Independence and Ethics and has some appreciation for Moral values. The OIP highlights his Practical career interests and generates the following possibilities to consider: Civil/Mechanical/Production/Mining/Aircraft Engineering or Geology, supporting John's interests in the field of Engineering. The second-highest field is Scientific, correlating with his current BSc degree choice. The SACII code supports his interests in Science and Engineering. Accordingly, the assessment results, supports a career in the practical and science field.

Recommendations

John would benefit from information gathering on the Engineering field, through interviewing others and reading up. This would assist in broadening his understanding. He has enrolled in Geology, which is also supported by the career interest inventories. John would benefit from exploring this further through research and gaining information from his lectures, tutors and senior students with a Geology major. John would benefit from a follow-up session.

Follow-up interviews

During the 6 months follow-up that took place at the end of his first year, John reported that he is applying to a Western Cape university to further pursue his studies in the field of Engineering. He reported that the assessment was useful, affirming his interest in and his suitability for engineering; and appreciated the follow-up and guidance to assist him with his career decision making process.

Another follow-up took place after 26 months, at the beginning of his second year BCom degree. John reported that he had previously enrolled in a BSc to upgrade his marks to obtain credits and entry requirements to study Engineering; but reported that he did not enjoy extreme mathematics and science, thus deciding to change faculties. He enrolled in a BCom degree at another university. He has an interest in the financial markets and sees himself growing in the investment market.

Vignette 3: Busi

“Help me identify which skills I have that I can use to my advantage in the field that I am studying, and what can I do to polish other skills. Also, which career would suit me besides this one?”

Busi is a nineteen-year-old IsiZulu female from Gauteng who resides on campus in a university residence. She is registered for first-year BSc, majoring in Geology and Economics.

Reason for referral

Busi came to the career centre to seek guidance on exploring her possible career directions. She has an interest in Geology and would like to further her studies in this field. She understands that it is difficult to get into honours and would like to explore her skills, to assist her in her current degree. She would also like to explore other career interests, besides Geology. Her second major was in Economics. It was evident that Busi would benefit from a career assessment. In response to the question on the Intake form: What are your plans/career directions for your degree at present? Busi's responded *“To obtain an honours degree and hopefully start work as soon as possible”*.

Background Information

Busi resides in one of the female residences. She reports that she has made good friends on campus and is well adjusted to Rhodes University and Makhanda. She has joined RU mountain climbing and a few societies on campus. In her leisure time, she likes to knit, read, sing, play soccer and netball and likes to attend theatre productions and go out with friends.

Both Busi's mother and father are sales managers. She has three siblings. The eldest is 31 years old and is unemployed. The second eldest is 29 years old and is working at a call centre for a large bank. Her youngest sibling was still in high school at the time of the assessment.

Results

Busi presented as a confident and articulate individual who interacted well. She was respectful and friendly, being engaged and interested in the assessment process. In response to the question on the assessment answer sheet: What is the purpose of testing? Busi's response was as follows: *"To see which career option matches my personality and interest"*.

SACII

Busi's three-letter code generated by the SACII is ASR, highlighting interest in Artistic, Social and Realistic career interest fields. The Occupational Finder suggest the following careers: Inspector, Exhibit builder, Teacher, Technician and Mechanic.

OIP

Career interest description	very low	low	medium	high	very high
Artistic		X			
Practical			X		
Scientific				X	
Administrative		X			
Nurturing	X				
Logical			X		
Persuasive			X		

The OIP scores indicate a high level of interest in the Scientific field, activities involving the understanding of natural and physical sciences. Logical/Computational activities involving problem-solving and analytical skills are accorded as moderate interest. Persuasive and Practical/mechanical career interest were also identified.

Personal work need	1	2	3	4	5	6	7	8	9
need for excitement				X					
need for stability				X					
need for change						X			
need for people			X						
need for control					X				

Interpersonal style: Busi is a quiet person who likes to keep to herself. She prefers to work alone rather than to work as part of a team. She is assertive, avoids criticism and shows little interest in a job that has management responsibilities. Thinking style: Busi prefers to react to a situation while it happens but also recognises the importance of planning. She is open to new ideas, she is careful and does not prefer to take risks and is likely to prefer a stable job. Coping style: Busi is sensitive towards other people's opinions and finds it difficult to accept criticism. She is generally anxious and tense about things. She tends to doubt her abilities and is concerned about failure.

JTI

	1	2	3	4	5	6	7	8	9	10	
Extraversion								X			Introversion
Sensing			X								Intuition
Thinking				X							Feeling
Judging				X							Perceiving

Busi's scores on the JTI place her within the ISTJ type. On Extraversion- Introversion, Busi scores strongly in the direction of introversion. This highlights that she appreciates time spent by herself to have the opportunity for thought and reflection. Busi's Sensing – Intuition score is more towards Sensing. This highlights her concern about matters to be centred on details and accuracy, evidence, proof and hard facts. Busi's Thinking – Feeling score is roughly in the middle band, slightly towards Thinking. This that she will likely approach most situations

from a logical perspective. On Judging – Perceiving, Busi's score is in the middle band of the scale somewhat towards Judging. She will prefer detailed planning, processing information in an orderly way to achieve her objectives.

VMI

Interpersonal Values: The results of the questionnaire suggest that Busi rates Altruism, Affection and Affiliation as being of low importance to her. Extrinsic Values: Busi places high emphasis on achievement, to do well and succeed in challenges. She places Financial, Security and Aesthetic values as moderate importance to her. Intrinsic Values: Traditional, Independence and Ethical values are top-scoring values.

Summary

Busi can be described as an Introverted, thinking individual who perceives information in an orderly way through her senses. Traditional, Independence and Ethical values are important to her and she places high emphasis on achievement. Busi's code from the SACII highlights interests in Artistic, Social and Realistic career interest fields, but on the OIP the Artistic career interest as fairly low, though an appreciation for the artistic/creative field is one of her extrinsic values (Aesthetic) of moderate importance. In her leisure activities, Busi highlights an interest in attending theatre productions. The OIP indicates high interest in Scientific careers, correlating with her studying towards a BSc and subject choice of Geology. Logical/Computational interests are of moderate interest, linking with her second major in Economics. The assessment supports Busi's current career choice in the scientific field but it also highlights other areas of to consider, such as the Logical/Computational and Realistic fields as well as her appreciation for the Artistic field.

Recommendations

Busi would benefit from further information gathering in the field of Geology and Economics and to explore the various career opportunities in this field and see what might appeal to her.

Follow-up interviews

During the 6-month follow up that took place at the beginning of her second year, Busi reported that her fear of failing and being excluded from the University had become a reality. She reports that she is still motivated and is working at a call centre, saving up money for her studies and is applying for bursaries to continue with studies in Geology or Engineering. She reported that the assessments were very useful; affirming her strengths and interests and providing her with insight. She expressed an appreciation for this service.

Another follow-up took place after 18 months, which would have been at the end of her final year. Busi reported that she was working as a shop assistant, closer to home. She had applied to a university and was accepted, but could not obtain funding. She is still determined to complete her studies and has applied for bursaries. She reported that the assessment was useful as she still refers to it from time to time, to identify what is important to her, especially her work values. She also reported that some interests have changed over time.

Vignette 4: Lelo

"I would like assistance on which career path to follow. I have a lot of interest and I would like to understand which career best suits me"

Lelo is a twenty-three-year-old amaShona female from Zimbabwe who resides in Gauteng province registered for a Bachelors of Arts majoring in Journalism, Politics and Linguistics and would like to take up a Language as well.

Reason for referral

Lelo came to the career centre and wanted assistance with her career choice. She is uncertain which career path to follow and would like to undertake a career assessment to assist her. In response to the question on the Intake form: What are your plans/career directions for your degree at present? Lelo's response was *"I would like to use my qualification to give back to the community"*.

Background Information

Lelo reports that she would like to be in a leadership position and highlighted that being a diplomat, an ambassador is something that she strives for. She reports that she would like to build communities and give back in some way. She reported that she was an assistant manager at a company but did not enjoy this. She reports that her mother is her role model. Her mother is a politician. Lelo is an only child.

Results

Lelo engaged well with the assessment and asked questions when she needed assistance. She was friendly, motivated and can be described as a self-driven individual. In response to the question on the assessment answer sheet: What is the purpose of testing? Lelo's response was as follows: *"To understand which career path to follow"*.

Lelo's three-letter code generated by the SACII is AEC, highlighting interest in the Artistic, Enterprising and Conventional career interest fields. The following careers are suggested, Editor, Journalist, Public relations Representative, Production manager, advertising and Teacher.

OIP

Career interest description	very low	low	medium	High	very high
Artistic				X	
Practical			X		
Scientific	X				
Administrative			X		
Nurturing	X				
Logical		X			
Persuasive					X

The OIP scores indicate Persuasive career interest as Lelo's highest career interest field followed by Artistic career interest area.

Personal work need	1	2	3	4	5	6	7	8	9
need for excitement						X			
need for stability		X							
need for change							X		
need for people				X					
need for control							X		

Interpersonal style: Lelo is assertive, she challenges and questions other people's views. She prefers to focus on the task at hand rather than on people's feelings. She prefers to work with a small group of people and may be attractive to careers that involve managing and coordinating others. Thinking style: Lelo is not very traditional or conservative and is more inclined to question authority. She likes excitement, she takes risks and prefers not to plan. She is not interested in a job where you follow set rules and procedures where there is no room for one's initiative. Coping style: Lelo may have difficulties in coping with new challenges, she does not accept criticism well and is fairly anxious and concerned about her work not being up to standard.

JTI

	1	2	3	4	5	6	7	8	9	10	
Extraversion							X				Introversion
Sensing								X			Intuition
Thinking							X		,		Feeling
Judging							X				Perceiving

Lelo's scores on the JTI placed her within the INFP category. On Extraversion- Introversion she leans towards Introversion, indicating an orientation towards the inner subjective world. She enjoys time spent with others but prefers time where she can be on her own and concentrate on the task at hand. She prefers work that requires thought and reflection may prefer to communicate in writing rather than discussion. On Sensing – Intuition, Lelo's score is towards Intuition. Her focus will therefore be towards the abstract features of a situation rather than the concrete. She will value change and experimentation and appreciates the incorporation of new methods. Therefore, she will enjoy thinking creatively and innovatively. Lelo's score on Thinking – Feeling is towards the Feeling dimension. This means that spontaneous intuitive feelings will influence her decision-making. On Judging – Perceiving Lelo's score on is towards Perceiving. Flexibility and adaptability will be more important to her.

VMI

Interpersonal Values: The results suggest that Lelo rates Altruism and Affiliation as of moderate importance to her whereas personal relationships are of greater importance to her. Extrinsic Values: Achievement, Security and Aesthetic values are of moderate importance. Economic status and wealth are also of moderate importance. Intrinsic Values: Independence, Moral and Ethical values are scored as the highest values whereas Traditional values are of the least importance to her.

Summary

Lelo can be described as an Introvert who perceives information using Intuition. She values personal relationships and places high emphasis on Independence, Moral and Ethical values. The OIP highlights Persuasive career interest as Lelo's highest interest and recommends the following career interest area: Legal Executive, Recruitment Consultant, Media Executive and Public Relations Executive as possible career interests to consider. This correlates with Lelo's career goals to be an ambassador and to assume a leadership role. This also affirms her

interest in politics. Both the SACII and the OIP highlight Artistic career interests, such as Journalism, Editor, Author, Art teacher, Graphic/Interior/Fashion designer and commercial artist. These supports with her current major in Journalism and Media Studies. The results appears to support Lelo's career interests in Politics and aspiring to a leadership position.

Recommendations

Lelo would benefit from exploring which career interest between Journalism / Media Studies or Politics is more important to her, as she might not be in a position to study both simultaneously and would need to select one over the other. She would benefit from further information gathering and needs to further explore how these interest fields might be part of her career trajectory.

Follow-up interviews

During the 6 months follow up that took place at the beginning of her second year of undergraduate studies, Lelo reported that she had chosen Politics, Linguistic, Journalism and media studies and Chinese studies. She was still uncertain what to do with her qualification, as she still feels the need to travel before settling into a set field.

Another follow-up took place after 18 months, at the end of her final year. Lelo reported that she was looking into teaching English in Korea as an opportunity to gain experience and that this as well as travelling is something that she always wanted to do. She appreciated the follow-up and emphasised the value of the career assessment process, affirming her interests and would encourage others to utilise this service.

Vignette 5: Li-Fen

"I would like to have someone to advise me on what career I could choose or what's available to me"

Li-Fen is a nineteen-year-old Chinese female from Johannesburg who resides on campus. She is registered for a Bachelor of Arts degree majoring in Linguistics, Classics and Psychology and also selected German studies.

Reason for referral

Li-Fen came to the career centre for career counselling in her first year of study and wanted to do a career assessment, to assist her explore her career interests and career direction. In response to the question on the intake form: What are your plans/career directions for your degree at present? Li-Fen responded *"I don't really have a plan because I don't know what suits me"*.

Background Information

Li-Fen is an only child and both her parents are travel agents. In her leisure time, she likes to read and write, and enjoys recreational activities such as drawing. She also likes photography. She joined the gaming society and is searching for a society related to photography.

Results

Li-Fen was quiet and not particularly talkative. She engaged well with the assessment and asked questions when she needed assistance. In response to the question on the assessment answer sheet: What is the purpose of testing? Li-Fen's response was: *"to find out what job I'm suited for and to get a better understanding of myself"*.

SACII

Li-Fen's three-letter code generated by the SACII is ASE, highlighting career interests in the Artistic, Social and Enterprising fields. The following careers are suggested: Editor, English Language and Literature Teacher, Public Relations Representative and Exhibit Designer.

OIP

Career interest description	very low	low	medium	high	very high
Artistic					X
Practical		X			
Scientific			X		
Administrative				X	
Nurturing		X			
Logical			X		
Persuasive	X				

The OIP scores indicate Artistic interest as Li-Fen's highest career interest. Administrative career interest is indicated as the second-highest interest. The test indicates that Li-Fen may not enjoy office work but should consider the administrative content of jobs as this is an area of high interest.

Personal work need	1	2	3	4	5	6	7	8	9
need for excitement			X						
need for stability				X					
need for change				X					
need for people	X								
need for control			X						

Interpersonal style: Li-Fen is a quiet independent person and a good listener. She dislikes conflict and avoids disagreements and is likely to avoid jobs where she has to work closely with people. Thinking style: Li-Fen prefers tradition and avoids taking risks. She is likely to prefer a secure, stable job that requires laid out structure and rules. Coping style: Li-Fen is relatively sensitive to other people's opinions and may have some difficulty accepting criticism. She tends to doubt herself and is concerned about failure.

JTI

	1	2	3	4	5	6	7	8	9	10	
Extraversion								X			Introversion
Sensing						X					Intuition
Thinking					X						Feeling
Judging					X						Perceiving

Li-Fen's scores are mostly in the middle range of the JTI dimensions, thus showing features of several different types of personality profiles, including ISTJ, ISTP, INTP, INTJ and ISFJ, ISFP, ISFP, INFP, INFJ, and perhaps indicating some lack of differentiation. Li-Fen's score on Extraversion- Introversion is towards Introversion, indicating that she is orientated towards the inner subjective world. She would prefer time spent by herself for reflection and does not feel the constant need for contact with the outer world of people and events. On Sensing – Intuition, Li-Fen's score shows leans more towards Intuition. She is likely to focus her attention to abstract features of a situation. Li-Fen's score on Thinking – Feeling is in the middle band of the scale. She will approach decision-making from a logical perspective, but

will also factor in intuition. On the Judging – Perceiving scale, Li-Fen's score shows equal tendencies, she may value spontaneity and flexibility as well as careful planning.

VMI

Interpersonal values: The low scores on Altruism suggest that Li-Fen thinks that people do better if they take responsibility for their own lives, rather than relying on others. Low emphasis on Affection and Affiliation suggest that she has no particular desire to be too close to people, tending to be much more self-sufficient and may prefer solitary pursuits. Extrinsic values: A low emphasis on Achievement suggests that Li-Fen will set realistic career targets, which she believes she can achieve without too much difficulty. The scores indicate limited concern for safety and security and a tendency of adventurous pursuits, to enjoy life to the full. Financial reward and economic status are of moderately importance. High emphasis on Aesthetics suggests an appreciation for cultural activities such as art, music and literature. Intrinsic values: A low scorer on moral values suggests that Li-Fen would be more inclined to view her own, and others', behaviour in the light of circumstances. Li-Fen regards Traditional values as moderately important and places some emphasis on national pride and loyalty. A high score on Independence suggests that Li-Fen believes in standing up for her views and personal freedom. Low scores on Ethical values suggests that Li-Fen believe there is a scientific, rational explanation for all phenomenon.

Summary

Li-Fen can be described as an Introverted individual who is likely to show a good balance between attention to detail and concern for abstraction. She is likely to approach most situations from a logical perspective but will factor intuition into her analysis. Her strengths are in the combination of conceptual, theoretical and critical thinking abilities with her determination to achieve the goals she sets. Both the SACII and the OIP highlight the Artistic career interest as Li-Fen's highest career interest and suggest the following opportunities: Graphic/Interior/fashion designer, Photographer, art/music teacher, Journalism, Literacy Editor. This links with her leisure interest in photography, reading, writing and art. The career interest findings support her subject choice in Linguistics, Classics and Languages. The SACII also highlights a Social career interest, thus supporting her subject choice in Psychology.

Recommendations

Li-Fen would benefit from further information gathering on her career interest and would need to further explore how her current courses might lead towards such careers.

Follow-up interviews

During the 6 months follow up, midyear of her second year of studies, Li-Fen reported that she was continuing with Linguistics as a major subject and was enjoying her studies and were starting to find her feet on Rhodes campus and in Makhanda. She expressed an appreciation for the career guidance process that has helped her understand herself and her career interests.

Another follow-up took place after 18 months, at the end of her final year. Li-Fen reported that her interest remained consistent during her studies. She reported that she asked herself if Linguistics is really something that she would enjoy for the rest of her life and realised that Classics is more suitable for her, in terms of her personality. She reported that as an Introvert she likes to examine text, analyse and understand ideas and has decided to continue her career development in the field. She would like to apply to a University in China, to study Chinese Philology and broaden her knowledge of Chinese. She is bilingual and is also interested in translating. She further reported that the career assessment definitely assisted in directing her towards a general direction of an occupation and that the careers listed in the assessment report assisted her to identify what she was interested in and what she was better suited for.

Vignette 6: Chrystal

“Please assist with clarity of subject choices as I am struggling and possible career to consider”

Chrystal is a nineteen-year-old white English female from Kwazulu-Natal who resides on campus. She is registered for a Bachelor of Social Science majoring in Psychology, Management and HKE.

Reason for referral

Chrystal came to the career centre for a career assessment in her first year to gain clarity and guidance in her subject choices as she was uncertain and wanted to explore various career options. After attending numerous orientation lectures, she had decided to take Sociology, Psychology, Management and HKE. She enjoyed the subjects but was finding Management difficult to grasp. She would like to work with people, she likes to understand people and regards herself as a “people-person”. She was thinking of pursuing Human Resources, hence taking up Management. She had been for a previous career assessment, which suggested that she takes up Social Science qualification at Rhodes. She explained that her decision to study at Rhodes was made at the last minute and was not well planned. She

further reported that she needed further clarity on her career direction. She highlighted that her strengths are good leadership skills, being good at serving others, and she was patient, logical and easy to get along with others. She dislikes the idea of doing something repetitively. She joined a few societies and clubs, including canoeing, boxing, cliff jumping, first aid and the Greek society. She mentioned that she was prone to injuries. Her leisure activities included watching movies, series that focused on the human mind, fishing and spending time with friends and being outdoors.

Background Information

Chrystal has two younger sisters, ages 16 and 11. Her father is self-employed and her mother is a stay-at-home mother. In response to the question on the Intake form: What are your plans/career directions for your degree at present? *"No idea"*.

Results

Chrystal engaged well with the assessment. She was friendly and motivated to do the assessment. In response to the question on the assessment answer sheet: How can I be of value to you as you construct your career? Chrystal responded as follows *"Give direction and motivation for a career goal to work towards"*.

SACII

Chrystal's three-letter code generated by the SACII is ESA, highlighting that her interests lie in occupations related to the broad categories of Enterprising, Social and Artistic interest fields. The following careers are suggested, Social welfare administrator, Social worker, Department manager and Special Education teacher.

OIP

Career interest description	very low	low	Medium	high	very high
Artistic	X				
Practical	X				
Scientific	X				
Administrative	X				
Nurturing					X
Logical			X		
Persuasive			X		

Chrystal's profile suggests a dominant interest in Nurturing careers, followed by Logical and Persuasive interest.

Personal work need	1	2	3	4	5	6	7	8	9
need for excitement						X			
need for stability	X								
need for change									X
need for people						X			
need for control						X			

Interpersonal style: Chrystal is sensitive of other people's feelings, friendly and sociable and prefers to work with other people rather than on her own. She is assertive and is attractive to a career that provides management opportunities. Thinking style: Chrystal tends to take risks and prefers to make decisions in the moment. Although she likes excitement and adventure, she is more likely to be attracted to a stable career. Coping style: She is concerned about her work standards and sensitive to other people's criticism and is likely to take a job with less pressure and less demand.

JTI

	1	2	3	4	5	6	7	8	9	10	
Extraversion				X							Introversion
Sensing							X				Intuition
Thinking									X		Feeling
Judging					X						Perceiving

Chrystal's scores on the JTI placed her into the ENFP and ENFJ categories. On Extraversion-Introversion, her score is towards Extraversion. She would enjoy working with other people and would prefer time spent with others to time spent entirely alone. On Sensing – Intuition, her score is slightly towards Intuition. This suggests that she is more concerned about abstract features and patterns, and would want to get an overall perspective on a situation. On Thinking – Feeling, her score is firmly on the Feeling dimension. She will therefore not be easily influenced by logical and analytical arguments. When dealing with people, Chrystal would be

more concerned about their emotions and would prioritise assisting them. On Judging – Perceiving, her score is in the middle, showing equal tendencies. She values spontaneity and flexibility, but not to the extent where she will not recognize the need for careful planning.

CIP

The career story narrative was used for this assessment. Values that are of importance to Chrystal are relationships, service, being efficient and seeing progress. She highlights helping others with their work, problems and emotions as her special talent. Chrystal finds fulfilment in helping people logically resolve their problems. She further expresses that she enjoys filing and organizing. One of her favourite quotes is “*where there is a will there's a way*”.

Summary

Chrystal is an Extrovert who enjoys working and interacting with people. The career interest inventories including the JTI suggest Social and Nurturing career interests. This supports her interest in the social sciences. Chrystal would also be likely to enjoy careers where she can lead and serve others. This was supported by her expressed interest as well as qualitative data from the CIP and her dominant career interest on the SACII. The following are a guide of specific career interests supported by the assessment results: Guidance Counsellor, Occupational Therapist, Primary School Teacher, Psychologist, Remedial Teacher, Salesperson, Social worker, Youth and Community worker.

Recommendations

The above results suggest that a Bachelor of Social Science is a good start in Chrystal's career development. It would be advisable to explore the above list of possible occupations to see if these are likely options for her to pursue. She would also benefit from a follow-up career counselling session to further explore her career interests and decisions taken.

Follow-up interviews

During a 6-month follow up that took place midyear of her first year, Chrystal reported that she is still uncertain about her degree, where this would lead to in the end, but will see how the remainder of her first year goes and might be in a better position to decide on the way forward. She reported that the assessments were similar to the assessments she had done before. She reported that it affirmed her interest in working with people and appreciated the process and experience.

Another follow-up took place after 27 months, at the beginning of her final year. Chrystal reported that she was not coping at university due to health reasons and had returned home.

She reports that she enjoyed the assessment process and was exposed to new assessments. The assessments were quite accurate in terms of her interests and who she is as a person. She had enrolled in a teaching degree at a university closer to home and that she had always wanted to go into the teaching field. She enrolled in the foundation phase and enjoys working with the learners. She reported that the different societies and associations at Rhodes University assisted her to see what she really enjoys doing. She further reported that COVID-19 also opened up an opportunity for her to teach online and this further affirmed her interest. She highlighted that one of the most important experiences was the Orientation week, with the various lectures on the different subjects on offer. *“The best thing that I’ve ever seen”*, giving her insight into the various subjects. She highlighted that more emphasis should be placed in the first year to explore options. She further noted that *“changing a degree is not the end of the world and that one should be open to moving degrees and different options”*. She expressed that this should be encouraged as *“you are not always certain when you start out”*. She further reported that one should *“follow your passion”* as her passion has always been teaching.

Vignette 7: Llewellyn

“I would like to express my interest and areas I would like to explore, and would like advice on what choice of degree would be the most dynamic and useful to qualify me and keep my options open, and advice on what I can learn outside of university that I do not need qualifications for”

Llewellyn is a twenty-year-old Indian male from Johannesburg who resides on campus. He transferred from another university to Rhodes and registered for a Bachelor of Science.

Reason for referral

Llewellyn sought career counselling in his first year at Rhodes University because he was uncertain about his career choice. He highlighted that although he was at university, he found it difficult to affirm his career interests. We explored his career interests and vision. He is interested in projects that use visual art within an environmental setting like maps, projecting animation and science. We looked at possible options to consider within the field of BSc and suggested that he speak to some of the lectures in Computer Science. In response to the question on the Intake form: What are your plans/career directions for your degree at present? Llewellyn's response was *“To study computer science and either another science or art field. Pursuing science through computer animation, design and simulation”*.

Background Information

Llewellyn transferred from another university where he studied Computer Science for a year. He has an interest in art and likes to combine art with science in his leisure time. He also enjoys longboarding and slacklining. Llewellyn's mother is an administrator, his father is a Human Resource manager. He has an older brother who is studying journalism. He reported that his family was very supportive and that they had a good relationship.

Results

Llewellyn engaged well with the assessment and asked questions when he needed assistance. He was friendly and build a good rapport with me. In response to the question on the assessment answer sheet: What is the purpose of testing? Llewellyn responded as follows *"To get an idea of a career path to follow as I am unsure"*.

SACII

Llewellyn's three-letter code generated by the SACII is RIA, highlighting interest in Realistic, Investigative and Artistic. The following careers are suggested, Architect, Landscape Architect, Television Technician, and Lightning-Equipment operator.

OIP

Career interest description	very low	Low	Medium	High	very high
Artistic				X	
Practical				X	
Scientific					X
Administrative		X			
Nurturing			X		
Logical			X		
Persuasive	X				

Llewellyn's highest career interest area is in the Scientific field and the second-highest career interest area is in the Practical field. The OIP further highlight an interest in Artistic skills. This highlights Llewellyn's artistic sense and appreciation for art and good design.

Personal work need	1	2	3	4	5	6	7	8	9
need for excitement								X	
need for stability					X				
need for change							X		
need for people		X							
need for control	X								

Interpersonal style: Llewellyn is a good listener. He does not like to take the lead and would prefer to work with one or two people he gets along with. Thinking style: Llewellyn has a strong sense of adventure and is more likely to take risks. He is unlikely to look for a job where one has to follow set rules and procedures with little opportunity for initiative and may look for a job that offers variety and excitement. Coping style: Llewellyn is secure and self-confident and can cope reasonably well with normal pressure and the demands of life.

JTI

Llewellyn's score on the JTI dimensions placed him on the INTP profile

	1	2	3	4	5	6	7	8	9	10	
Extraversion								X			Introversion
Sensing							X				Intuition
Thinking			X								Feeling
Judging						X					Perceiving

Extraversion- Introversion: Llewellyn's score is towards Introversion. This suggests that he might enjoy time spent with others but would prefer time spent on his own, where he can work alone and concentrate carefully on what he is doing. On Sensing – Intuition his score is more on Intuition. He will be interested in abstract underlying features of a situation. Llewellyn's score is towards the Thinking dimension on Thinking – Feeling. Logic and analysis will be important to him. On Judging – Perceiving Llewellyn's score is slightly towards Perceiving. This suggests that he will value structure and organization but not to the extent where he will sacrifice spontaneity and flexibility, where these are called for.

Summary

Llewellyn can be described as an Introverted, thinking individual who perceives information through a balance of both intuition and accurate appraisal of facts. The OIP highlights the Scientific field as Llewellyn's highest career interest. This supports his current degree choice. Practical careers are highlighted as his second-highest career interest field. The following career interests are suggested: Civil, Mechanical, Production, Mining, Aircraft Engineering and Geologist. His SACII code RIA support the realistic and investigative features of these careers. The SACII further support his stated interest in the Artistic field, particularly visual art within an environmental setting and animation.

Recommendations

Llewellyn would benefit from information gathering on his interest in the Science and Computer science and reading up on combining the two interests. He would benefit from consulting lectures and students who have registered for an interdisciplinary degree and have selected majors in both BSc and Computer science.

Follow-up interviews

During the 6-month follow-up at the end of his first year, Llewellyn reported that he has selected Computer science and Geography as his major subjects and were enjoying these. He also took Mathematics and Physics to keep his options open. He further reported that he was looking into combining the two subjects and pursue Geographical Information Sciences (GIS). He appreciated the follow-up and career guidance. He reported that the career assessment process does not really tell an individual what to do but is rather an exploration process and informative, giving possible directions that are more likely be suitable and enjoyable.

Another follow-up took place after 18 months, at the end of his final year. Llewellyn reported that he is interested in mapping and space development, and GIS was a current option. He was also interested in teaching English abroad and would also like to do his Honours perhaps specialising in GIS to further develop his interest in Computer Science and mapping. Reflecting on the assessment process and what assisted him in his career trajectory, Llewellyn reported that the assessment assisted him in understanding his personality and how this is aligned with his career interest. He further reports that *"as a first-year one is limited in your exposure to career knowledge and an opportunity to widen one's knowledge in the different fields is helpful"*. He further reported that making a career choice should not be rushed.

Vignette 8: Faith

“I am truly at a crossroads where I’m telling myself that entrepreneurship is my best calling and my degree shouldn’t define my course as I could even be in the creative fields and still be employable and authentic to my true calling. I also believe that having our feet in too many pies, being able to see yourself do many things, owning that you are multifaceted but not being able to decide which stone to step on first”.

Faith is a twenty-two-year-old amaXhosa female from the Eastern Cape. She resides off campus and enrolled in a Bachelor of Social Science (BSS) degree, majoring in Economics and Legal Theory.

Reason for referral

Faith wanted assistance with her career choice in her first year. She is uncertain which career part to follow and wanted to do a career assessment to assist her. In response to the question on the Intake form: What are your plans/career directions for your degree at present? Faith responded *“I would like to own my own business and think of establishing my roots in economics and politics and become a diplomat”.*

Background Information

Faith reported that she initially registered for a BCom Law degree but was struggling with Accounting as she did not have this background. She changed to BSocSc and selected majors in Law and Economics. She reported that she would like to gain confirmation of her current direction as she changed her degree, she wanted to be certain that she was making the right choice towards her goals. She finds the YouTube platform very informative. She likes reading magazines and a good book, and finds shopping therapeutic. Her father is a school principal and her mother was a teacher, but is now an entrepreneur. She has two sisters and two brothers. She reported feeling supported by her family and describes them to be very career-focused.

Results

SACII

Faith’s three-letter code generated by the SACII is EAC, highlighting interest in the Enterprising, Artistic and Conventional career interest field. The following careers are suggested, Business Manager, Business Representative, Labour Union, Lawyer, Industrial relations director and Funds development director.

OIP

Career interest description	very low	Low	Medium	High	very high
Artistic				X	
Practical	X				
Scientific	X				
Administrative			X		
Nurturing	X				
Logical		X			
Persuasive					X

The OIP scores indicate Persuasive career interest as Faith's highest career interest and Artistic interest as her second-highest career interest.

Personal work need	1	2	3	4	5	6	7	8	9
need for excitement				X					
need for stability			X						
need for change				X					
need for people					X				
need for control									X

Interpersonal style: Faith is very assertive and likes to take control of a situation. She is more likely to be interested in a career that involves management and the coordination of people. Although she would prefer to work alone, she is more likely to strike a balance between working on her own and with other people. Thinking style: Faith is self-disciplined, traditional and respects authority. She likes structure and would be more likely to pursue a career where there are clear systems and rules to follow. Coping style: Faith is concerned about the quality of her work and appears to be sensitive to criticism.

JTI

Faith's scores on the JTI placed her within the ENTJ, ENTP, ENFJ and ENFP type categories.

	1	2	3	4	5	6	7	8	9	10	
Extraversion				X							Introversion
Sensing									X		Intuition
Thinking						X					Feeling
Judging						X					Perceiving

Extraversion- Introversion: Faith's score is somewhat towards Extroversion, indicating that she will enjoy mixing and working with others. On Sensing – Intuition, the score is firmly on Intuition. Her focus will be more on the abstract features of a situation rather than the concrete. She will be open to new ideas and creativity. Faith's score is in the middle of Thinking and Feeling. She will therefore use both her intuitive feelings and logical analysis to gather information and make final decisions. On Judging – Perceiving, Faith's score is also in the middle band, showing equal tendencies. She will therefore value structure and organization but not to the extent where she will sacrifice spontaneity and flexibility.

VMI

Interpersonal Values: Faith rates Altruism as being of high importance. This suggests that she would consider it important to consider those in need and attempt to alleviate their suffering. Extrinsic Values: Faith places Achievement, Financial and Aesthetic values as moderate importance to her. Economic status and wealth are also of moderate importance to her. Intrinsic Values: Faith places Independence as her highest value, with Traditional values as of least importance. Low scores on Ethical values suggest that Faith believe that there are scientific, rational explanations for all phenomenon.

Summary

Faith can be described as an Extroverted-Intuiting individual who is articulate in her likes and dislikes. She has a passion for African development and is concerned about people's wellbeing. The OIP highlights Persuasive career interests as highest recommending the following: Legal Executive, Recruitment Consultant, Media Executive, and Public Relations Executive. This supports with Faith's career goal to be a diplomat and to have her own business. The SACII code EAC further supports her interest in the Enterprising field. The OIP and the SACII further shows an interest in the Artistic field. The assessment results support her interest and majors in Economics and Legal theory.

Recommendations

Faith would benefit from further information gathering in her interests to work within a government organization (e.g., being a diplomat), as well as her interest in Enterprising.

Follow-up interviews

During a 6 months follow-up that took place towards the end of her second year, Faith reported that the assessment was helpful to affirm her career interest in Law and Business. The personality test was helpful as it gave her insight into herself and how this correlates with her interests. She further reports that it was affirming to have her values confirmed on paper.

A final follow-up took place after 10 months in her final year, where Faith reported that she would pursue the business studies. This decision was further influenced by reading up on women pursuing careers within the Business field that "*looks like me*" and that she can relate to. She additionally reported that exposure to friends and family members within the field also assisted in her understanding Business and how possible career trajectories would appear in both Business and Law. Faith reported that she would have benefited from having earlier exposure and career assessment. She further highlights the need for interest questionnaires when one applies to an institution; and exposure to different career fields, inclusive of more modern possibilities. The follow-up session further explored the various options and referral to Rhodes Business School to obtain more information. She also highlighted that she might still pursue Law at a later stage.

Vignette 9: Tamia

"I would like some guidance on what to do with my degree. My combination of subjects does not really lead to a conventional career path, so I am uncertain what to pursue, what options are available to me. I also want to become more self-aware so that I can easily identify opportunities that would suit me".

Tamia is a twenty-year-old white English female who resides off campus. She enrolled in a Bachelor of Science majoring in Mathematical Statistics and HKE.

Reason for referral

Tamia self-referred for a career assessment after a call was sent out to students, being uncertain about her career options. She needed assistance with what career options were available with her degree, skills and interests, as her combination of subjects does not open up a conventional career path. Tamia expressed an interest in a job that requires interacting with people. In response to the question on the Intake form: What are your plans/career

directions for your degree at present? *“My combination of subjects does not really lead to a conventional career path so I am uncertain, but I would like to work with people”*

Background Information

Tamia enjoys spending time outdoors, running, going to the beach, and hiking. She enjoys board games and creating art. She enjoys listening to music and podcasts. She has been a member of the University hockey and mountain climbing club. Her mother is a small business owner, her father is unemployed and her sister is 17-years-old, and at school.

Results

Tamia engaged well with the assessment. She was friendly and motivated to do the assessment.

SACII

Tamia's three-letter code generated by the SACII were ESC, highlighting that her interests lie in occupations related to the broad categories of Enterprising, Social and Conventional interest fields. The following careers are suggested, Director of Institutional Research, Educational programme directors, Outpatient services director and Financial specialist.

JTI

	1	2	3	4	5	6	7	8	9	10	
Extraversion				X							Introversion
Sensing					X						Intuition
Thinking							X				Feeling
Judging						X					Perceiving

Tamia's scores on the JTI placed her in the following categories, ESF, ESFP, ENFJ and ENFP.

On Extraversion- Introversion, the score is towards Extraversion, indicating that she will enjoy mixing and working with other people. Tamia is likely to appreciate variety in her work. Tamia's score was in the middle band of Sensing – Intuition, showing more or less equal tendencies. She may balance between attention to detail and concern with abstract and underlying features of a situation. She is open to innovation and change that is supported by evidence

and facts. Tamia's score was on the Feeling end of Thinking – Feeling. Intuitive feelings will influence her more than logic in an initial analysis of a situation. On Judging – Perceiving, Tamia's score was more towards Perceiving. She is likely to value some structure and organization, but not to the extent where she will sacrifice spontaneity and flexibility.

VMI

Interpersonal Values: Tamia rates Altruism and Affiliation as moderate importance to her. She considers it important to be helpful and is considerate to those in need and wherever possible will attempt to alleviate their suffering. Extrinsic Values: Tamia rates Achievement as being of importance. She will want to excel in everything she does. This desire to succeed is likely to propel her to make personal sacrifices and drive her to constantly set high standards of achievement. Intrinsic Values: Tamia places Independence, Moral and Ethical values as her highest values, with Traditional values as of least importance.

Summary

Tamia's strength will come from her strong orientation towards people and her drive for outstanding achievement. The SACII highlights her interest in occupations related to ESC. Tamia's extroversion nature highlighted by the JTI, combined with social interests suggest that she would benefit from a people-centred work environment. Tamia will do well in an occupation that allows her to combine her natural affinity to Statistics, with her need for working directly with people. Tamia appears to be doing courses that can lead her in the direction of a fulfilling career aligned with her interests and values.

Recommendations

Tamia would benefit from further information gathering in both fields of HKE and Mathematical Statistics. She would benefit from information interviewing and consulting with her lecturers for further insight in career trajectories with a combination of both her interest.

Follow-up interviews

During the 6-month follow up that took place at the end of her final year, Tamia reported that the assessment encouraged her to work hard and to think more about the future. She reported that it highlighted a lot for her as she likes to plan things. *"It boosted my confidence and affirmed my decisions"*. She further reported that the personality interest inventory was of great value and appreciated having this on paper. After consulting with lecturers and exploring various career fields, Tamia reported that she has an idea of how to incorporate her interests.

Another follow-up took place after 10 months, towards the end of her Honours year. Tamia reported that she was pursuing joint honours in HKE and Mathematics and was enjoying her subjects. She planned to do some job interviews and job shadowing opportunities and is thinking of pursuing a Master's degree in the future.

Vignette 10: Tobias

“What jobs can I go into after completing this degree and what other subjects can I take to aid my degree choice”

Tobias is a twenty-year-old AmaXhosa male from the Eastern Cape who resides on campus. He registered for a Bachelors in Science, majoring in Computer Science and Information systems.

Reason for referral

Tobias came to the career centre in his first year and wanting to know what career options were available for him when he completes his degree. He reported that although he knew that he wanted to be in the Science field, his decision to choose this specific qualification was influenced by his friend. Tobias hoped that this process would shed light on possible career opportunities to explore with his major subjects. He also wanted guidance on subjects that would lead to possible career opportunities that he would be suited for. In response to the question on the Intake form: What are your plans/career directions for your degree at present? Tobias's response was *“Uncertain, I don't know what field to study further if I choose to study further after undergraduate”*.

Background Information

Tobias reports that he has close friends in Makhandla. He enjoyed spending time with friends, playing hockey, occasionally rowing and watching movies. Tobias's mother is a former Business and Economics teacher who is now self-employed in the supply chain industry. His father is a medical doctor. He has older siblings, one is a medical doctor and the other is studying Accounting. He reported that his family is supportive and that they had good relationship within the family unit.

Results

Tobias engaged well with the assessment. He was friendly and asked questions where he was uncertain. In response to the question on the assessment answer sheet: What is the purpose of testing? Tobias responded as follows *“To get an idea of a career path to follow as I am unsure”*

SACII

Tobias's three-letter code were ERC, highlighting interest in Enterprising, Realistic and Conventional. The following careers are suggested, Production manager, Supervisor (Communication equipment) and Instrument and Repair supervisor.

OIP

Career interest description	very low	Low	medium	high	very high
Artistic	X				
Practical				X	
Scientific				X	
Administrative				X	
Nurturing	X				
Logical		X			
Persuasive			X		

Tobias's interest area was in the Practical, Scientific and Administrative fields.

Personal work need	1	2	3	4	5	6	7	8	9
need for excitement			X						
need for stability						X			
need for change						X			
need for people							X		
need for control						X			

Interpersonal style: Tobias is assertive and likes to take the lead most of the time. He is sociable, likes to work with people and finds it most useful to swap ideas around when resolving problems. Thinking style: Tobias recognizes the importance of planning, carefully considers all options and doing things correctly. He appreciates security and stability. Coping style: Tobias has a realistic and stable approach to life. He resolves problems realistically and maturely.

JTI

Tobias's score on the JTI dimensions placed him in the ESFJ and ESFP categories.

	1	2	3	4	5	6	7	8	9	10	
Extraversion			X								Introversion
Sensing			X								Intuition
Thinking								X			Feeling
Judging					X						Perceiving

Extraversion- Introversion: Tobias's score is towards Extraversion. This suggests that he will enjoy being with others, both at work and leisure. Variety would also be important to him. On Sensing – Intuition, Tobias's score is more on Sensing. He will be concerned about matters of detail and accuracy. Tried and tested methods are his preferences, with suggestions supported by hard facts. Tobias's score is towards the Feeling dimension of Thinking - Feeling. To him, subjectivity will be more important than logical analysis and his evaluation of a situation will be guided by his intuitive point of view. Tobias shows equal tendencies towards Judging and Perceiving. This suggests that he will value spontaneity and flexibility, but not to the extent where he will not recognize the need for careful planning.

VMI

Interpersonal Values: The scores suggest a high need for Affiliation with close personal contact with people to be of great importance. Extrinsic Values: Scores indicate a strong need for safety and security, with some value on Economic status. He also prefers to set realistic, attainable goals. Intrinsic Values: Independence, Moral and Ethical values score as his highest values, with Traditional values as least important.

Summary

Tobias can be described as an Extrovert, this links with his intake where he described himself as an outgoing, social individual. The JTI indicated that he is concerned with details and accuracy, preferring facts and traditional methods. This is further supported by the SACII, ERC code, with career interests in the Conventional and Realistic fields and having a set way of approaching and executing work tasks. The OIP profile indicates that Tobias prefers fields that are Practical, Scientific and Administrative. This supports his current subject choice in Computer Science and Information Systems. The assessment further highlights a need for financial dependence and stability and these need to be considered in his decision to study further. The JTI and OIP suggest that Tobias values an interactive work environment. Tobias

further explained that Information Systems is more of an extroverted, interactive subject; therefore, his personality and interest seems to support his major subjects.

Recommendations

Tobias would benefit from information gathering about his interest in Information Systems through interviewing others and reading up on the field. This would provide information on possible career trajectories in his career interest. He would further benefit from a consultation with his lecturers on career options that align with his need for interacting with people. His research should include further information on whether postgraduate studies would be beneficial.

Follow-up interviews

During the 6-month follow-up that took place at the end of his second year, Tobias reported that the assessments and feedback were valuable and assisted him with his decision to pursue an Honours degree. He further reported that the process was long but gave him valuable insight into his personality and how this is aligned to his career interests.

Another follow-up took place after 10 months, towards the end of his final year. Tobias reported that he was still interested in Information Systems, but more on the management and business side than the technical side of the field. He would like to peruse his honours in Information Systems registered under a BCom. He further reported that his first decision was rushed and influenced by his friend and parents, and reports that career guidance should be something that one should thoroughly explore in your first year, rather than decisions being rushed and influenced by others.

Vignette 11: Thobile

"I would like to know which of my majors is a better fit for me and would like to explore what postgraduate qualification would better suit my interest"

Thobile is a twenty-one-year-old AmaZulu female from Durban who resides on campus. She registered for a Bachelor of Arts Degree majoring in Organizational Psychology and Legal theory.

Reason for referral

Thobile self-referred for a career assessment after a call was sent out to students, being uncertain about her career options. She registered for a BA. After attending numerous orientation lectures, she decided to take Law and Psychology as her majors, as these were of interest to her. She came to the career centre in second semester of her first year and reported

that she was uncertain about Law and reported that she does not have a passion for this subject anymore. She was still interested in Organizational Psychology. She has an interest in developing others, wellness, and working in the corporate field. We explored other options like enterprise management, teaching and doing further research into other qualifications in line with her interest. She wanted to establish if Organizational Psychology was a good fit for her. In response to the question on the Intake form: What are your plans/career directions for your degree at present? *“To do a postgraduate qualification after my undergraduate degree”*.

Background Information

Thobile enjoys watching series and listening to music. She further enjoys seeing others fulfilling their potential and being the best version of themselves. Her mother is a caterer and her father works at a Hotel. She has a younger sister who is studying BA, and a baby brother.

Results

Thobile engaged well with the assessment. She was friendly and motivated. In response to the question on the assessment answer sheet: What is the purpose of testing? Thobile responded as follows *“To confirm my decision to work as an Industrial psychologist and to enter into entrepreneurship thereafter”*

SACII

Thobile's three-letter code generated by the SACII were ESA, highlighting her interests in occupations related to the broad categories of Enterprising, Social and Artistic fields. The following careers are suggested: Business Representative, Labour Union, Placement Director, Social Welfare administrator, Conventions Manager and Special Education teacher.

OIP

Thobile's profile suggests a dominant interest in the Nurturing field followed by Artistic interest and Administrative interest.

Career interest description	very low	Low	medium	high	very high
Artistic				X	
Practical	X				
Scientific	X				
Administrative				X	
Nurturing					X
Logical		X			
Persuasive	X				

Personal work need	1	2	3	4	5	6	7	8	9
need for excitement		X							
need for stability			X						
need for change						X			
need for people	X								
need for control		X							

Interpersonal style: Thobile is a good listener, independent and reserved individual. Thinking style: Thobile avoids taking risks but is open to new ideas and recognizes the importance of planning and correctly doing things. Coping style: Thobile is concerned with producing a good standard of work and might have difficulty accepting criticism.

JTI

	1	2	3	4	5	6	7	8	9	10	
Extraversion								X			Introversion
Sensing						X					Intuition
Thinking								X			Feeling
Judging							X				Perceiving

Thobile's scores on the JTI placed her into the ISFP and INFP categories.

Thobile's scores as more Introverted. She is therefore likely to appreciate the time spent by herself, to have an opportunity for thought and reflection. At work, Thobile would enjoy working by herself although she would also appreciate some contact with others. On Sensing – Intuition, her score leans towards Intuition. She is likely to balance attention to detail and concern with abstract features of a situation. Thobile's score is on the Feeling dimension of Thinking – Feeling. To her, subjectivity will be more important than logical analysis. When dealing with other people, Thobile is more responsive to people's feelings and will try to accommodate their points of view. On Judging – Perceiving, Thobile's score is towards Perceiving. Flexibility and adaptability will be important to her.

Summary

Thobile can be described as an Introverted and Intuitive individual. She has a strong interest in careers that involve activities centred on helping and caring for others. Both the SACII and the OIP highlight her career interest in Nurturing and Social fields. Artistic career interest fields are further supported by both inventories, highlighting her interest in activities involving creative, artistic skills. Her expressed interest in the Enterprising field is supported by the SACII. According to these results, Thobile appears to be doing courses that can lead her in the direction of a fulfilling career aligned with her interests.

Recommendations

Thobile would benefit from further information gathering in both fields, Organizational Psychology and Law. She would benefit from gathering information from the Business school to explore possible postgraduate options. Her interest in the Artistic field is also highlighted by both career interest inventories, an area of interest that Thobile might explore and incorporate in her career trajectory.

Follow-up interviews

During the 6 months follow-up that took place at the beginning of her second year, Thobile reported that the assessment was of great value to her. It confirmed her entrepreneurial interest and an understanding of her personality. She reported that she found career counselling important and that this should be considered at the start of first year. She also reported that what assisted was attending as many orientation lectures as possible, to broaden and gain knowledge in other fields.

A final follow-up took place after 18 months, at the end of her final year, when Thobile had enrolled in a diploma in Enterprise Management. This was aimed at her interest in starting up her own business. She was also looking into teaching English in China and has identified a school of interest. She reported that she would explore honours in Organizational Psychology to be more skilled and to further develop herself.

Vignette 12: Kayla

“I would like some career guidance or perhaps someone else’s perspective on which careers would suit me”

Kayla is an eighteen-year-old AmaXhosa female from the Eastern Cape who resides in a coastal town. She is in matric, at a crossroads and uncertain what career path to follow.

Reason for referral

Kayla wanted assistance with her career choice, being uncertain which career path to follow and would like to undertake a career assessment to assist her. Kayla was particularly interested in studying medicine, and also has an interest in the Accounting field. Kayla reported that she enjoyed Life Science, Accounting and English. Her least favourite subjects were Afrikaans and Physical Science. She further reported that she was in the top five of her Grade. In response to the question: What are your plans/career directions for your degree at present? Kayla's response was *"Once I have matriculated, I would love to study medicine and then I would like to specialize in cardiovascular surgery and work in Cape Town"*.

Background Information

Kayla enjoys watching sports, especially British soccer. She reports that she preferred academics, reading and watching TV. She was a member of the United Christian Society of South Africa and was a library monitor. Kayla stayed with her grandmother and her fifteen-year-old cousin. Her grandmother is a nurse, her mother worked in housing development in Pretoria and her father is an accountant. Her mother's sister is a chartered accountant.

Results

GRT2

Verbal reasoning: This assesses the ability to perceive and understand ideas and concepts that are expressed verbally in a logical manner and these are influenced by educational experience. Kayla's score on this test suggests a slightly above-average level of verbal reasoning. Numerical General reasoning: This test assesses the ability to understand and use numerical concepts and numbers logically and rationally and to do numerical computation. Kayla's score on this test suggests a slightly above-average level of numerical reasoning. Abstract General reasoning: This test assesses the ability to understand new concepts and ideas that have not been previously experienced. It can indicate educational and potential as it does not depend on educational achievement. Kayla's score suggests a below-average level of fluid or natural reasoning ability. The GRT2 recommended aptitude for further education.

SACII

Kayla's three-letter code generated by the SACII were ICS, highlighting interest in Investigative, Conventional and Social career interest fields. The following careers are suggested: Immunohematology, Microbiologist, Public Health, Research Assistant and Accountant.

OIP

Career interest description	very low	Low	Medium	high	very high
Artistic	X				
Practical		X			
Scientific					X
Administrative					X
Nurturing				X	
Logical			X		
Persuasive	X				

Extraversion – Introversion: Kayla's score is towards Introversion. She appreciates the time spent by herself to have the opportunity for thought and reflection. In the workplace, she would enjoy working by herself but would appreciate some contact with others during the workday. Kayla's score on Sensing – Intuition shows more or less equal tendencies towards both. This would imply a balance between attention to detail and concern with abstract ideas. On Thinking – Feeling, Kayla's score is in the middle. She will approach situations both in terms of her subjective, intuitive feelings and also using more logical analysis in decision-making. Kayla's score is more to the Judging of Judging – Perceiving. It is important to her that she achieves the objectives that she has set for herself preferring planned and ordered activities.

CIP

Kayla would like to be a doctor, to help people. Her grandmother is a nurse and Kayla has been exposed to the hospital environment. Another option is an Accountant as her father and aunt are accountants. Strengths and development: Kayla reported that her greatest strengths are being hardworking, determined, unselfish, caring, and humble/modest, thinking before acting and being principled. These strengths support good work ethics that are required in both career interests highlighted by Kayla. Kayla reported that although she is hardworking, she does tend to procrastinate. This area would need to be developed if she were to undertake a degree in medicine or accounting. Kayla reported being shy and finds socializing an effort. Although Kayla identifies this as an area of development she does report that she values being of service to others. Role models: Kayla chose female role models who have achieved excellent things in their lives, in areas of finance, performance and philanthropy. Kayla has also been positively influenced by her grandmother and her academic excellence is reinforced by her achievements at school. She reflected that *"if I put my mind to it, I can achieve anything"*

Summary

Kayla's GRT2 results indicate that she has the aptitude to pursue a university degree. Based on the interview conducted and the various assessments, it appears that she is more of an Introvert who enjoys working alone. Given Kayla's personality type, she would need to develop her social skills and confidence to feel comfortable working in fields where social and communication skills are important. The CIP highlights her need for financial security, personal development and altruism as important values, as well as achievement. This is further reflected in her mottoes "sometimes silence is the greatest noise", "deeds and not words", "be the change you want to see in the world" reflecting her determination to be a positive influence in the world. The SACII code (ICS), and the OIP fields of Science, Administrative and Nurturing support both accounting and medicine career interests.

Recommendations

Kayla would benefit from further information gathering in both tertiary education options. This would assist in identifying what she is most passionate about and to holistically reflect on her chosen fields to make an informed decision.

Follow-up sessions

During the 8 months follow-up that took place mid-year of her first year, Kayla reported that she moved to Cape Town after matric and applied to various institutions and was accepted at a university. Her mathematics marks did not allow her to enter into the medical field. She enrolled in the upgrading programme, SciMathUS to improve her marks. She reported that her motivation and interest to enter the medical field was reinforced by the guest speakers they had throughout the programme. All the presenters shared their success stories and were also part of the upgrading programme. Kayla reported that her career goal was to enter into 4th-year medicine after obtaining her BSc degree. She reported that the career guidance was very helpful and that she enjoyed the process and experience. She highlighted that the aptitude test affirmed and supported her ability to enter into the medical field; and that her grandmother's profession also influenced her decision. In particular, her parents' guidance and support were very important to her. Kayla reported that Grade 12 is very late to decide what you would like to study. She reported that she did her research early in Grade 10 and 11 and would encourage others to do the same. She also highlighted the importance of open days and shared how meaningful these can be.

Vignette 13: Sideeq

"I would like for you to assist me in finding the best career for my future with the skills set I am good at"

Sideeq is an eighteen-year-old coloured male from the Eastern Cape, residing in Makhandla. He has a passion for hockey and was undecided on which career path to follow.

Reason for referral

Sideeq came to the career centre for assistance with his study options in Grade 12. He was interested in Accounting as well as Information Systems due to the job opportunities in these fields and is conflicted on which one to pursue. We explored these and we also looked at other fields of interest, such as sports science. He expressed a passion for becoming a professional hockey player, physiotherapist or personal trainer but is concerned about the career prospects of these career fields. I suggested that he do some research to gather information, to be better

informed to assist him in his career exploration journey. In response to the question on the Intake form: What are your plans/career directions for your degree at present? Sideeq's response was "*Accounting and Information Systems*". He undertook a career assessment to assist him to explore his interests and see what qualification is better suited for him.

Background Information

Sideeq played hockey for the social league and had been playing hockey since he was in Primary school. He had been in leadership roles. He reported that he enjoyed hockey more than academics. Sideeq lived with his parents. His father is a policeman and his mother is an administrator. He has a younger brother who is 11 years old. Sideeq reported that his parents were supportive of his interests and suggested that he studies Law or HKE.

Results

Sideeq engaged well with the assessment and asked questions when he needed assistance. In response to the question on the assessment answer sheet: What is the purpose of testing? Sideeq responded as follows "*To make it clear to me what career suits me best*".

GSAT

Verbal reasoning subtest: Sideeq's score falls within the average range. Nonverbal subtest: Sideeq's score falls within the average range. Overall, Sideeq's scores suggest an average level of ability.

SACII

Sideeq's three-letter code were RSE, highlighting interest in Realistic, Social and Enterprising. The following careers are suggested: Coach, Professional Athlete, Occupational Therapist, Teacher, Financial Manager and Labour Relations manager.

OIP

Career interest description	very low	Low	Medium	high	very high
Artistic	X				
Practical					X
Scientific		X			
Administrative					X
Nurturing		X			
Logical			X		
Persuasive	X				

Sideeq's highest career interests are in the Practical field and the Administrative field.

Personal work need	1	2	3	4	5	6	7	8	9
need for excitement			X						
need for stability					X				
need for change					X				
need for people		X							
need for control	X								

Interpersonal style: Sideeq is a quiet individual who tends to form close relationships with others. He prefers to work on his own and avoids conflict. Thinking style: Sideeq is likely to have a balanced approach to work, being traditional and open to unconventional ways of doing things. He does not like to take risks and prefers a clearly defined and structured career path. Coping style: Sideeq is secure and self-confident and should be able to cope with normal life pressures and demands.

CIP

Sideeq highlights a Professional hockey player, Physiotherapy and Accounting as his three career interest fields. He is passionate about hockey, enjoys working with sport-related teams and injuries and reported that he is good with numbers. The test suggests interests in the Realistic category, Enterprising and Conventional career fields. Strengths: Sideeq highlighted that he is good in sports and numbers and that his special skill is playing hockey. Development area: He reported that working hard on one thing causes him to neglect the other things. Thus, finding a balance is a developing area for him. Role models: He reported that he was inspired by his cousin who played first team hockey and is still inspired by SA's hockey captain as well as his parents and coaches.

JTI

	1	2	3	4	5	6	7	8	9	10	
Extraversion										X	Introversion
Sensing				X							Intuition
Thinking							X				Feeling
Judging				X							Perceiving

Sideeq's score placed him in the ISFJ categories. On Extraversion- Introversion, Sideeq's score is strongly Introverted. This suggests that he will enjoy time spent by himself and will enjoy being absorbed in his thoughts and ideas. He is likely to have a few close friends. Sideeq's score is towards the Sensing dimension on Sensing – Intuition. This suggests that he is more traditional and regards accuracy and detail as important factors. On Thinking – Feeling, Sideeq's score is on the Feeling end. To him, subjectivity will influence him more than logic and his initial analysis of a situation will tend to be based on his spontaneous, intuitive feelings. Sideeq's score is towards the Judging dimension of Judging – Perceiving. Planning things in detail is of importance to him, if he is to achieve his objectives.

VMI

Interpersonal Values: The questionnaire suggested a high need for Affiliation, which would suggest that he considers close personal contact with people to be of great importance. Sideeq is as concerned as most people about those who are in need and to alleviate others' suffering.

Extrinsic Values: Sideeq places limited emphasis on achieving challenging tasks and places little value on Economic status. Intrinsic Values: Sideeq places high emphasis on Independence and Traditional values.

Summary

Sideeq's scores on the GSAT suggested an average level of functioning, a aptitude for further education. An interest in Accounting is supported by the SACII and CIP highlighting interest in the Realistic and Enterprising fields, as well as the OIP highlighting an interest in Administrative activities. Sideeq's interest in physiotherapy and playing professional hockey is also supported by the CIP and OIP highlighting interest in the Practical field. This also supports an interest in HKE.

Recommendations

Sideeq would benefit from reading up and gathering information in his interest areas and from obtaining admission requirements for HKE, Sport Science and Accounting from institutions that offer these. He would benefit from further research on pursuing his passion for hockey.

Follow-up interviews

At the 7 months follow-up after the feedback, Sideeq reported that the assessments were very valuable and assisted him with his decision to pursue his passion in hockey. He further reported that the process gave him valuable insights into his personality and how this is

aligned with his interests. He was coaching hockey at a local school in Makhanda. He reported that he enjoyed this and was looking into pursuing a sports coaching qualification. He further reported that there were prospective career opportunities within the school setting and an opportunity to develop and study further.

Another follow-up took place after 18 months, Sideeq reported that he was waiting for feedback from universities where he applied for Accounting and Information Technology. He reported that he enjoyed working with numbers and that he is good in Accounting and that this is something that he misses. He was still coaching hockey and was playing club hockey, and that would continue to play if he remains in Makhanda.

Comparing the findings

The vignettes highlight key findings worth noting. The majority of the participants seemed to have an idea of what they would like to pursue. The career counselling and career assessment process also assisted with confirming if they are heading in what may be a suitable career path that they are interested in and passionate about. The findings from the case studies showed how in some cases it seemed as if some participants were unrealistic about the match between their aspirations and their academic results; and for others, there was perhaps some career immaturity when too many scores were in the middle range of the JTI. The findings also show how other factors influenced participants' career decision-making (such as marks achieved or failures). The follow-up interviews throughout undergraduate studies further highlighted their career interests and factors that influenced and impacted on participants' career decision-making process, these will be discussed in chapter 7.

The following section will look at the differences and similarities that emerged from the sample of career assessments by looking at differences and similarities in degrees and career interest inventories. Table 5 is a comparison of assessment codes between participants SACII (3 letter RIASEC code) and OIP (2 highest interest).

Table 5

Comparison of assessment codes between participants SACII (3 letter RIASEC code) and OIP (2 highest interest)

No	Pseudonym	Sex	Race	Degree	SACII	OIP
1	Naomi	F	B	BSocSc	ASE	Artistic (Ar) Scientific (Sc)
2	John	M	W	BSc	RCE	Practical (Pr) Scientific (Sc)
3	Busi	F	B	BSc	ASR	Scientific (Sc) Logical (Lo)
4	Lelo	F	B	BA	AEC	Persuasive (Pe) Artistic (Ar)
5	Li-fen	F	CH	BA	AEC	Artistic (Ar) Admin(Ad)
6	Chrystal	F	W	BSocSc	ESA	Nurturing (Nu) Logical (Lo)
7	Llewellyn	M	Ind	BSc	RIA	Scientific (Sc) Practical (Pr)
8	Faith	F	B	BSocSc	EAC	Practical (Pr) Admin (Ad)
9	Tamia	F	W	BSc	ESC	n/a
10	Tobias	M	B	BSc	ERC	Scientific (Sc) Practical (Pr)
11	Thobile	F	B	BA	ESA	Nuturing (Nu) Artistic (Ar)
12	Kayla	F	B	Scholar (BSc)	ICS	Scientific (Sc) Admin (Ad)
13	Sideeq	M	C	Scholar (BCom)	RSE	Practical (Pr) Admin (Ad)

Table 6

Patterns of assessment codes between the SACII and OIP

SACII	No of participants who obtained the same code	OIP
Realistic	5	Practical
Investigative	2	Scientific
Artistic	4	Artistic
Social	3	Nurturing
Enterprising	2	Persuasive
Conventional	3	Admin/Logical

Table 7*Links between SACII (RIASEC code) and Degree type*

Degree	R	I	A	S	E	C
3x BSocSc	0	0	3	2	3	1
6x BSc	4	2	2	2	3	4
3x BA	0	0	3	1	3	2
1x BCom	1	0	0	1	1	0

Table 8*Links between RIASEC 3-letter code and Degree type*

Degree	SACII (3 letter RIASEC code)					
3x BSocSc	1x ASE	1x ESA	1x EAC			
6x BSc	1x RCE	1x ASR	1x RIA	1x ESC	1x ERC	1x ICS
3x BA	2x AEC	1x ESA				
1x BCom	1x RSE					

Table 9*Links between OIP and Degree type*

Degree	Art	Prac	Sci	Ad	Nu	Log	Pe
3x BSocSc	1	0	1	1	1	1	1
6x BSc	0	3	4	1	0	1	0
3x BA	3	0	0	1	1	0	1
1x BCom	0	1	0	1	0	0	0

The above comparisons illustrate both the three-letter RIASEC code from the SACII and the two codes generated from the OIP, with reference to the different degrees. It is interesting to note that under the BSocSc degree, all three of the participants' RIASEC codes included Artistic, Social, and Enterprising career interests. The RIASEC code for the majority of BSc participants included Realistic (4 participants), Enterprising (3 participants), and Conventional (4 participants).

It is also interesting to note that the two codes generated by the OIP for the BSc degree are mainly Scientific (4 participants) and Practical (3 participants) interests. Furthermore, the patterns above illustrate that all three participants registered for a BA degree had Artistic interest and Enterprising interest.

The tables above also indicate gender differences in degree choices. All participants registered for a BA and BSocSc degree are females. The sample indicates an equal split between males and females registered for a BSc degree, with one male registered for a BCom degree.

The vignettes in this chapter summarise the details of the 13 participants that are part of this study. This chapter presented the process-related and content-related findings of this study. Due to the sample size, these findings cannot be generalised further in relation to the general population, but produce findings that contribute to deepened understandings in this study. The next chapter will review findings from the service evaluation questionnaire that the participants completed after the career assessment feedback session.

Chapter 6: Career Services Evaluation Questionnaire

The aim of this chapter is to present the findings from the career services evaluation questionnaire that participants completed after undertaking the career assessment. This chapter starts by outlining a brief overview of the career services evaluation questionnaire. The statistical analysis of the questionnaire will be presented and explained. The chapter ends with participants' responses related to the open-ended questions of the questionnaire.

Subjective satisfaction with the career services was assessed using a 15-item questionnaire to evaluate the perceived effectiveness of the career counselling services. The questionnaire was derived from the 15-item SWI (Masdonati et al., 2009) specifically developed for evaluating the quality of the counselling centre services at a university in Switzerland. The questionnaire was originally compiled in French, but was translated into English (See Appendix 6); and further adapted for the use of this study (See Appendix 7).

The career service evaluation questions concerned several aspects of the career services such as the quality of the admission process, the counselling session, the career assessment, insight obtained from the services, a broad overview, and opinions about career services. These findings are grouped according to the different sections of the questionnaire presented below:

- Initial contacts: Questions 1-3

Questions in this section aimed to obtain information from the participants regarding the quality of the initial contact, and admittance process.

- The interactions and process: Questions 5-7

Questions in this section aimed to assess the quality of the career counselling received, to assess if participants' career goals were met and their perceptions of the helpfulness of the career guidance and advice received.

- The career assessment: Questions 8-10

Questions in this section aimed to assess the quality of the career assessment measures used at the centre in the assessment process.

- Career insights and options: Questions 11-12

The questions in this section were included to obtain information about the effectiveness of the career guidance process to facilitate career insight and knowledge.

- Overall opinions about career services: Question 4, 13 -15

The questions in this section aimed to collect information from participants on the relevance, utilisation, and their recommendations about the career services. Questions that were adapted

for this study include questions 1 and 2 that evaluate the admission process, question 7 that includes the evaluation of the counselling process, question 8 that evaluates the career assessment measures and questions 4 and 14 that evaluate the relevance of career services. The questionnaire adapted for this study also includes open-ended questions to provide for commentary on specific assessment measures and more subjective feedback from participants about the career assessment process and services.

Descriptive statistics were applied to organise, analyse and interpret the quantitative data of the questionnaire, with data being presented in graphical and numerical ways. Descriptive statistics enable the creation of a profile of any group that follows a common practice. The primary goal is to describe the sample at any specific point in time without trying to make inferences or causal statements (Verma, 2012). The purpose of descriptive studies is to ascertain and describe characteristics of variables of interest in a given situation, from an individual point of view.

Variables that are assessed on the ordinal scale are also known as categorical variables, but here the categories are ordered. Categorical variables that assess performance (good, average, poor) are ordinal (Verma, 2012). The variables used to measure and evaluate the perceived effectiveness of the career counselling services for this study are ordinal variables, measured on a Likert scale (strongly agree - 5, agree - 4, neutral - 3, disagree - 2, and strongly disagree - 1).

The statistical analysis of the questionnaire will now be explained.

Please note: the tables below are based upon a sample size of 15, rather than the 13 for whom case vignettes were composed. This is because the questionnaires were completed by an additional two students who did the assessments, however, they did not respond to requests for follow-up interviews (both by telephone and by email), leading to difficulties in contacting them (both left the university before that period).

Demographic overview of participants

The demographics of the participants presented in Table 10 below show that females were dominant in the sample, with males constituting just over one quarter.

Table 10*Demographic overview of participants by gender*

		Gender of participant			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	4	26.7	26.7	26.7
	Female	11	73.3	73.3	100.0
	Total	15	100.0	100.0	

Table 11 represents the race of the participants. The majority were classified as Black, with other ethnic groups in smaller numbers.

Table 11*Demographic overview of participants by ethnic group*

		Ethnic group of participant			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Black	9	60.0	60.0	60.0
	White	3	20.0	20.0	80.0
	Indian	1	6.7	6.7	86.7
	Coloured	1	6.7	6.7	93.3
	Chinese	1	6.7	6.7	100.0
	Total	15	100.0	100.0	

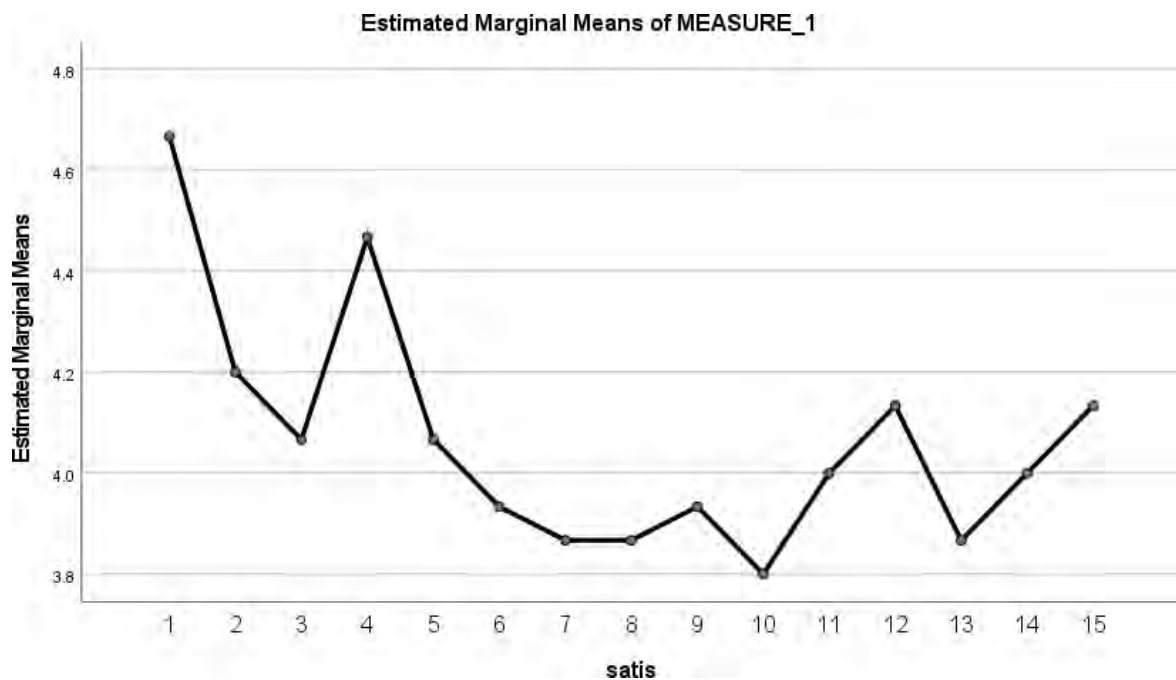
Table 12*Descriptive statistics of participants' responses to the career services evaluation questionnaire*

	Descriptive Statistics									
	N Statistic	Minimum Statistic	Maximum Statistic	Mean Statistic	Std. Error Std. Error	Std. Deviation Statistic	Skewness		Kurtosis	
I was able to get an initial appointment in an acceptable amount of time	15	4	5	4.67	.126	.488	-.788	.580	-1.615	1.121
The email/telephonic communication left me with a satisfactory impression	15	4	5	4.20	.107	.414	1.672	.580	.897	1.121
I found the welcome at the reception courteous and respectful	15	3	5	4.07	.206	.799	-.128	.580	-1.348	1.121
I regard career counselling as a necessary part of the University	15	4	5	4.47	.133	.516	.149	.580	-2.308	1.121
I was satisfied with the session(s) and the content of the interaction	15	3	5	4.07	.228	.884	-.142	.580	-1.783	1.121
My expectations and my needs were understood	15	3	5	3.93	.182	.704	.092	.580	-.669	1.121
The advice I received was relevant and helpful	15	3	5	3.87	.192	.743	.227	.580	-.970	1.121
The results of tests and questionnaires were informative and helpful	15	3	5	3.87	.192	.743	.227	.580	-.970	1.121
The remarks and feedback that were made seemed to me to be relevant	15	3	5	3.93	.153	.594	-.004	.580	.537	1.121
The information and documents provided left me with a satisfactory impression	15	3	5	3.80	.175	.676	.256	.580	-.505	1.121
Counselling helped me broaden my insight about more effective career options	15	3	5	4.00	.195	.756	.000	.580	-1.077	1.121
The career assessment helped me broaden my insight about careers	15	3	5	4.13	.133	.516	.282	.580	1.401	1.121
Overall, I am satisfied with the quality of career counselling I received	15	3	5	3.87	.192	.743	.227	.580	-.970	1.121
I would not hesitate to return for career counselling if I felt the need	15	3	5	4.00	.098	.378	.000	.580	7.000	1.121
I would recommend career counselling to a friend	15	4	5	4.13	.091	.352	2.405	.580	4.349	1.121
Valid N (listwise)	15									

Each of the questions on the questionnaire is covered in the explanation below, and grouped according to the relevant aspects of the process. Before the explanation, please see the summary of these statistics on the graph below, showing the mean scores on each Likert scale for each question.

Table 13

Mean scores on the Likert scales for each question.



Initial contacts

Looking at the first three questions about the initial appointment, communications, and welcome at reception, the Likert scale scores were between 4 (agree) and 5 (strongly agree). These showed that the majority (66.7% strongly agreed) were very pleased with getting an appointment at an acceptable time; the communication by email or phone gave a satisfactory impression (80% agree). The students were somewhat mixed in their opinions about their welcome at reception, with 33.3% (strongly agree) being very satisfied, 40% (agree) being satisfied and 26.7% unsure.

Q1. I was able to get an initial appointment in an acceptable amount of time

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	5	33.3	33.3	33.3
	Strongly Agree	10	66.7	66.7	100.0
	Total	15	100.0	100.0	

Q2. The email/telephonic communication left me with a satisfactory impression

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	12	80.0	80.0	80.0
	Strongly Agree	3	20.0	20.0	100.0
	Total	15	100.0	100.0	

Q3. I found the welcome at the reception courteous and respectful

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Unsure	4	26.7	26.7	26.7
	Agree	6	40.0	40.0	66.7
	Strongly Agree	5	33.3	33.3	100.0
	Total	15	100.0	100.0	

The interactions and process

Questions 5-7 focus upon the interaction and career counselling process. The majority of the students were satisfied with the content and interaction experienced in the sessions, with 40% (strongly agree) being very satisfied and 26.7% (agree) being satisfied. The majority of the students indicated that their expectations and needs were understood, with 53.3% (agree) being satisfied, and 20% (strongly agree) being very satisfied. Students were satisfied with the advice received, with 46.7% (agree) being satisfied, and 20% (strongly agree) being very satisfied.

Q5. I was satisfied with the session(s) and the content of the interaction

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Unsure	5	33.3	33.3	33.3
	Agree	4	26.7	26.7	60.0
	Strongly Agree	6	40.0	40.0	100.0
	Total	15	100.0	100.0	

Q6. My expectations and my needs were understood

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Unsure	4	26.7	26.7	26.7
	Agree	8	53.3	53.3	80.0
	Strongly Agree	3	20.0	20.0	100.0
	Total	15	100.0	100.0	

Q7. The advice I received was relevant and helpful

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Unsure	5	33.3	33.3	33.3
	Agree	7	46.7	46.7	80.0
	Strongly Agree	3	20.0	20.0	100.0
	Total	15	100.0	100.0	

The assessment itself

Questions 8-10 evaluate the psychometric assessment. Half of the students were satisfied with the assessment and indicated that the results of the test and questionnaires were informative and helpful; with 46.7% (agree) being satisfied, 20% (strongly agree) being very satisfied, and 33.3% being unsure. The majority were pleased with the remarks and feedback received, with 66.7% (agree) being satisfied. More than half were satisfied with the results and documents received, with 53.3% (agree) being satisfied, 13.3% (strongly agree), being very satisfied, and 33.3% unsure. In this category, the comments about being “unsure” in questions 8 and 10 cannot be further explained because these were not probed in follow-up.

Q8. The results of tests and questionnaires were informative and helpful

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Unsure	5	33.3	33.3	33.3
	Agree	7	46.7	46.7	80.0
	Strongly Agree	3	20.0	20.0	100.0
	Total	15	100.0	100.0	

Q9. The remarks and feedback that were made seemed to me to be relevant

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Unsure	3	20.0	20.0	20.0
	Agree	10	66.7	66.7	86.7
	Strongly Agree	2	13.3	13.3	100.0
	Total	15	100.0	100.0	

Q10. The information and documents provided left me with a satisfactory impression

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Unsure	5	33.3	33.3	33.3
	Agree	8	53.3	53.3	86.7
	Strongly Agree	2	13.3	13.3	100.0
	Total	15	100.0	100.0	

Career insights and options

Questions 11 and 12 consider how both career counselling and career assessment broaden students' career insight and options. More than half of the students indicate that counselling helped broaden their insight about career options, with 46.7% (agree), being satisfied 26.7% (strongly agree), being very satisfied and 26.7% being unsure. The majority of the students indicate that the career assessment helped broaden their insight about careers with 73.3% (agree), being satisfied and 20% (strongly agree) being very pleased.

Q11. Counselling helped me broaden my insight about more effective career options

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Unsure	4	26.7	26.7	26.7
	Agree	7	46.7	46.7	73.3
	Strongly Agree	4	26.7	26.7	100.0
	Total	15	100.0	100.0	

Q12. The career assessment helped me broaden my insight into careers

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Unsure	1	6.7	6.7	6.7
	Agree	11	73.3	73.3	80.0
	Strongly Agree	3	20.0	20.0	100.0
	Total	15	100.0	100.0	

Overall opinions about career counselling

The last three questions as well as question four cover students' overall opinions about career counselling. Overall, the majority of participants were satisfied with the quality of career counselling received, with 46.7% (agree), being satisfied and 20% (strongly agree), being very satisfied; 33.3% were uncertain. All the students who completed the questionnaire regard career counselling as a necessary part of the university with 53.3% (agree), being satisfied and 46.7% (strongly agree), being very pleased. The majority of participants (86.7% agree), were satisfied enough to indicate that they would not hesitate to return for career counselling if they felt the need and would recommend career counselling to a friend.

Q13 Overall, I am satisfied with the quality of career counselling I received

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Unsure	5	33.3	33.3	33.3
	Agree	7	46.7	46.7	80.0
	Strongly Agree	3	20.0	20.0	100.0
	Total	15	100.0	100.0	

Q4. I regard career counselling as a necessary part of the University

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	8	53.3	53.3	53.3
	Strongly Agree	7	46.7	46.7	100.0
	Total	15	100.0	100.0	

Q14. I would not hesitate to return for career counselling if I felt the need

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Unsure	1	6.7	6.7	6.7
	Agree	13	86.7	86.7	93.3
	Strongly Agree	1	6.7	6.7	100.0
	Total	15	100.0	100.0	

Q15. I would recommend career counselling to a friend

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	13	86.7	86.7	86.7
	Strongly Agree	2	13.3	13.3	100.0
	Total	15	100.0	100.0	

Summary of descriptive statistics

The career services evaluation questionnaire used in this study aimed to evaluate the subjective satisfaction and perceived effectiveness of the career counselling services from the students' (participants') perspectives. Results from the statistical analysis suggest that the majority of participants were satisfied with the quality of the initial contact and admission process. Further it seems that the majority of participants were also satisfied with the quality of the career counselling sessions, with the majority indicating that their expectations were met and that the advice received was helpful.

One of the aims of this study was to gain an indication of the perceived effectiveness of the psychometric tests used at the career centre. Analysis from the questionnaire indicates that the majority of the participants were satisfied with the feedback and information received from

the tests and indicated that the information obtained from the assessment was helpful and relevant. Results also indicated that participants were satisfied with the career assessment and counselling process in that it broadened their knowledge about career options. The findings further suggest that the majority of participants would recommend the career services, that they would utilise the service again if the need arose and that they regard career counselling as a necessary service at university. There were two aspects that need further elucidation: the information received and results of the assessment tools themselves; and the quality of the career counselling received.

Participants' responses to open-ended questions

The questionnaire included two open-ended questions to obtain qualitative data and information that is more detailed from participants, regarding their experiences of the career assessment. It is important to note that not all participants completed this section.

In general, "if the effect of missing data is not taken into account the results of the statistical analyses will be biased and the amount of variability in the data will not be correctly estimated" (Bennett, 2001, p. 2). It is therefore useful, if at all possible, to record the circumstances and reasons why data may be missing. There are several methods that can be used to handle missing data that are based on the assumptions of type and degree of missing data (Bennett, 2001). The incomplete sections in the questionnaire can be better explained due to a lack of understanding of the questions. It could also be that with the small sample, anonymity would be hard to preserve and thus mitigated against candid responses.

Participants' responses related to the open-ended questions are presented below.

"I found the experience and the test useful in the sense that it helped prove that what I wanted to do I was suited to do, according to my personality and what I find interesting on the test I took" – Participant with no follow-up interviews. This participant reflects positively on the career counselling services and highlights how this process, especially the personality and interest tests, helped affirm her career interests. It is possible (though cannot be confirmed) that this then led to this person withdrawing from the university.

"The process is helpful in highlighting what I need to work on and what I need to understand about myself before making any decisions" – Participant with no follow-up interviews. This illustrates how the process assisted with facilitating self-insight and career knowledge.

"My assessment was done entirely online so I cannot comment on the reception, however, I would give the email leading up to my appointment a 5/5" – Tamia. This reflection illustrates satisfaction with the quality of the initial contact, and admission processes of the centre.

"The report is most useful to me because I can go back to it when I need to. The report gave me a better understanding of my strengths and put in words the aspects of the job that I naturally prioritise" – Tamia. Tamia's reflection echoes the previous participant's account and

illustrates how the career assessment feedback assisted with gaining self-insight and career knowledge. She also highlights the value of the assessment report as a document to refer to in the future when the need arises.

Llewellyn holds a similar view that career counselling assists with broadening career knowledge, as he noted in his reflection, *“What was most useful was testing of aptitudes and giving greater awareness of what career options exist outside of the current scope. I think this could still be expanded upon”*. He highlighted that this process could be expanded further, indicating the need for more career education and increasing students’ awareness of the various careers. This reflection thus points towards the value of career assessment.

In the following comment, Li-Fen reflects on the value of the assessment battery used at the centre. *“To be fair, all the assessments are equally useful as they correlate and correspond with each other. They all helped me to see that I still lean towards a specific job more than others, and the counsellor did provide helpful suggestions about available options”*. This comment noted that the different assessments were well integrated, an important aspect of the career counselling process. She also reflected positively on the career counselling services and career guidance received at the centre.

“Overall I feel like the feedback given by the results of the different tests as well as the potential career choices one can choose from aligns with my interest, capabilities as well as strengths” – Busi. Busi’s comments illustrate that she was satisfied with the information and feedback she received from the career counselling sessions. She highlights the important role of assessment measures in the career counselling process.

“I see career counselling as a useful tool to help you reach your professional goals” – Faith. Faith’s brief reflection about career counselling illustrates that career services should assist students to develop professionally and that career counselling should be goal-orientated.

“I would suggest that once there is feedback on the test results taken by the participants there should be an immediate appointment set up so the results can be discussed and more guidance could be given to the participant early, while there is still a chance to make changes in the career choice if there is a need for it”- Busi. This illustrates the important role of the turnaround time and that feedback should be provided within a reasonable timeframe to assist students with their career/subject choices. When contracting with clients at the career centre, we inform clients that the assessments process takes 4 to 6 weeks. This participant did not receive feedback within the agreed timeframe; this was partly due to the various operational functions at the career centre during this timeframe.

Summary of overall evaluation

This chapter has discussed the findings from the career services evaluation questionnaire that participants complete after undertaking a career assessment. The findings from the questionnaire reflected on participants' evaluations of the psychometric tests used at the career centre and the career counselling services at the centre. Overall, it would appear that the majority of participants were satisfied with the quality of the career counselling and career assessment process and that the career counselling services helped participants with their career decision difficulties. Participants also highlighted the value and broader relevance of career counselling at university and made positive remarks about the assessment battery that was used. The sample of students were therefore satisfied with the service. The value of this finding will be substantiated and explored further in the next chapter. As previously discussed, the small sample size of the study means that these findings cannot be viewed in isolation and require a triangulated interpretation that considers the participants' later reported experiences. The following chapter will discuss the findings from the two follow-up interviews with the same participants whose responses were considered in this chapter, except for the two who did not return for the follow up interviews.

Chapter 7: The relevance and effectiveness of a university career counselling services

The findings discussed in this chapter relate specifically to the two research questions:

1. What role do psychometric assessments play to assist students in their career decision making?
2. What factors appear to impact career decision-making and to assist students to make career-related decisions?

The main aim of the research questions is to evaluate the relevance and effectiveness of a university career counselling services from the students' perspectives. The focus is on gaining an indication of the perceived effectiveness of tests used and ascertaining the influences that impact students' career decision-making over the course of undergraduate studies.

This chapter aims to provide evidence in response to answer the above research questions and will review information obtained from the transcribed narrative data of participants' career service evaluation questionnaires; and their responses to the two follow up interviews that took place over the course of undergraduate studies, following their career assessments.

Participants' study trajectories

A narrative outline of the participants' study trajectories is reported below.

Narrative of participants' study trajectories:

Naomi, BSocSci Organizational Psychology and HKE – applied for employment in HR

John, BSc Geology and Economics – switched to BCom, working part-time in the family business

Busi, BSc Geology and Economics – still not completed, working at a retail store

Lelo, BA Journalism and Media studies and Chine studies – intend to teach English overseas

Li-Fen, BA Classics and Linguistics – doing honours in Classics - intend to further studies

Chrystal, BSocSci Psychology and Management – switched to BEd, online teaching part-time

Llewellyn, BSc Engineering — switched to BSc Computer Science and Geography – intends to do honours in GIS and teach English overseas

Faith, BCom Law — switched to BSocSci Economics and Legal theory – intend to further studies in Business Studies

Tamia, BSc Mathematical Statistics and HKE – doing joint honours in HKE and Mathematics, part-time work at a local school

Tobias, BSc Computer Science and Information Systems (IS) – intend to do honours in IS

Thobile, BA Organizational Psychology and Legal theory – enrolled in PGDip (Enterprise Management)

Kayla, enrolled in SciMathUS to improve her National Senior Certificate (NSC) marks – intends to enrol in the Faculty of Medicine and Health Science

Sideeq, took a gap year, part-time work coaching hockey at a local school – enrolled in Information Technology and Accounting

Responses to question 1

In response to the first research question, “What role do psychometric assessments play to assist students in their career decision making?” participants’ own words were the main data source. In the analysis, the following prevalent themes emerged: identifying strengths and interest; career guidance; links between personality and interest; values and clarity and confirmation. Each of these themes is briefly described below, followed by excerpts from participants’ follow-up interviews and career service evaluation questionnaires, with the source of the excerpt noted in brackets after each.

Identifying strengths and interest

The majority of the participants reported that the career assessment assisted in identifying their strengths and interests. For most, this is an important factor in the career decision-making process and when selecting degree majors, students’ major subjects need to align with their strengths and interests to enable them to achieve. This is reflected in the following excerpt, where Naomi reflects on the aim of doing the career assessment: *“The aim was trying to see where my interests lie, I wanted to see what I actually really wanted from the bottom of my heart, does it align with my abilities, I think, yip”* - Naomi (6 months follow up). She further reflects on the assessment process and highlights the importance of how the assessment assisted her in identifying her strengths and interests: *“Overall, I feel like the feedback given by the results of the different tests as well as the potential career choices aligns with my interest, capabilities as well as my strength”* - Naomi (career service evaluation questionnaire).

In a similar way, all participants were asked to reflect on their experiences of the career assessment and their perceptions of its usefulness. Most of the participants reflected on how the assessment affirmed their interest and passion as reflected by the excerpts below: *“Yes, the test affirmed my interest and suitability for the engineering field”* - John (6 months follow-up). John was uncertain about what he was studying he wanted to pursue a career in the engineering field but was uncertain about this. The above excerpt is a reflection on how the assessment affirmed his interest in engineering and highlights the value of the assessment process.

Similarly, Thobile had an interest in the entrepreneurial field but was uncertain about this. She reflected on how the assessment confirmed this for her: *"The assessment was great, it helped to confirm my entrepreneurial interest, I am more of a business type of person and the assessment also showed this."* - Thobile (6 months follow-up).

It was interesting to note that participants did not single out a particular test but highlighted how the combination of different tests that formed part of this assessment battery assisted in identifying interest and strengths. Both Li-Fen and Tamia comment on this: *"To be fair, all of them are equally useful as they correlate and correspond with each other. They all helped me to see that I still lean towards the artistic field of jobs more than others"* - Li-Fen (career service evaluation questionnaire):

I guess in all the tests, they say what the results mean and they relate that to you... The report said my interest is in Enterprising, Social and Conventional so they relate it back to my courses, my desire to work with people and that kind of thing, so it was really helpful that they don't just say these are your interests but they relate it to you how that impacts you as an individual..., so you get a better understanding from somebody who knows the assessment and somebody who interviewed you -Tamia (final follow up).

Here, Tamia highlights the value of having assessments interpreted by trained professionals and not just an internet-generated report. She further emphasised the importance of having the assessment interpreted by someone who has interviewed you, with whom you have built rapport and who has gained an understanding of your passions and interests.

It was also interesting to note how the assessment report provided more insight into participants' interests, how they used the report to express themselves better and how they still refer to the assessment report from time to time. Both Tamia and Busi reflect on this in the following excerpts:

I've seen the benefit that I had from it...I really appreciate having this opportunity to have a career assessment done and have something that I can go back to and look at, like my report. Even things like when I'm writing, applying for scholarships I can explain myself better because I have an understanding from the report, I have better words to explain myself - Tamia (final follow-up).

I still have the papers and I still refer to them from time to time. Like the personality test, the personality traits I have. Like the things of being realistic, artistic and stuff like that.. Some things are still true, some things have changed - Busi (final follow-up)

The above excerpts from participants highlight their perceptions of the value of the assessment battery used in this study. Therefore, this seems to support literature that suggests that using interest inventories, practitioners are provided with the necessary information to reveal individual interest, competencies and career preferences (Harrington & Long, 2013).

Career guidance

Most of the participants reported on how the career assessment provided them with career guidance and clarity on what to study; as well as the way forward in their career decision-making process. This is reflected in the following excerpt where Naomi reflects on the reason for seeking career guidance:

I shared that when I came to you, I think I was more into art, very artistic, more into drama and it was really more of a consulting part, is it even worth it, am I making the right decision following academics more than passion? - Naomi (6 months follow-up).

Naomi had mixed feelings about whether to pursue her passion in the artistic field or to follow a more “academic” path. She made use of the services to assist with her decision-making. Similarly, Lelo’s reflection on the career assessment is that it helped to provide her with guidance on the way forward: *“The career assessment really did help a lot in me deciding the way forward in terms of what to do next. I would definitely encourage others to make use of the services as it helped me gain perspective.” - Lelo (final follow-up).*

Lelo reflects positively on the career assessment process as indicated by her expression that she would encourage others to make use of the services. Chrystal also reports positively on the career assessment process at Rhodes University. She had done two career assessments prior to the one at Rhodes University and said: *“I was doubting what I was studying at Rhodes ...so I would say that this assessment, the one at Rhodes really encouraged me to change degrees” - Chrystal (final follow-up).* Chrystal was uncertain about what she was studying at University. She had done a career assessment prior to enrolling at Rhodes University; according to Chrystal, the outcomes of the assessment “said” she should enrol for a BSocSc at Rhodes University. It is evident that the career assessment process provided her with guidance and encouraged her to pursue a degree more suited to her.

It is interesting to note that participants who have done career assessments before, continue to seek career services and undertake career assessments when they need career guidance. Chrystal had done two career assessments prior to this study, similarly, Tobias undertook a career assessment in Grade 11 when he needed assistance on what to study at University as illustrated by the excerpt: *“I applied for Engineering at Wits because I did the career*

assessment in grade 11” - Tobias (final follow-up). Likewise, John reported that he had done two or three career assessments prior to this study as illustrated by the excerpt below:

To be honest I always struggle with the assessment because it always feels like, ja I don't think to be honest it really helped. Before that, I did at least two or three assessments already. I did go to career assessments like PE, Grahamstown and did one through the school and ja, I feel it was just a bit all inaccurate and it was a bit all over the place and made me more confused. And it also differs, ja. You are never sure what to believe or what to think. I read it quite a few times, the report and I can't remember the specifics - John (final follow-up)

From the above, it would seem that John did not receive the necessary support and guidance he had hoped for from the prior career assessments but continues to make use of this service. Since all three participants, Chrystal, Tobias and John continue to make use of the career assessment for career guidance, this finding might suggest the value and role of career guidance for these participants.

This theme also refers to participants' comments about the career assessment process, which they felt is more of an exploration process, that provides them with more information to work with, it focuses on individual strengths and what they enjoy, as illustrated by Llewellyn and Tamia in the excerpts below:

The career assessment does not really tell you what to do, but it is more of an exploration process and an informative process that gives you possible directions that are more likely to suit you, that you are most likely to enjoy - Llewellyn (final follow-up).

He further states:

I think a commitment to a career path depends on more than what can be tested for, students should be advised to figure out personal priorities and then see career counselling as a useful tool to help them satisfy their professional wants and needs - Llewellyn (service evaluation questionnaire).

Tamia said:

The assessment gave me a lot of confidence with the way forward because at that stage I wasn't sure whether I should continue with things that didn't really match and I wanted to continue with both because I really enjoy both of them, I didn't want to have to choose. The assessment gave me a lot of confidence to keep on going because the assessment showed strength in both subjects and it was not like I was going against

my strengths or something like that, ja, it gives you more information to work with to figure out what you want to do. - Tamia (final follow-up)

The role of psychometric assessment as an aid in the career guidance process is illustrated by Tobias, Kayla and Li-Fen in the excerpts below. Tobias wanted to know what options are available after completing his degree. Kayla had mixed feelings about whether to pursue accounting or medicine. Tobias reported: *"The test and feedback were really helpful, it gave me a bit of perspective to do honours."* - Tobias (first follow-up). Kayla said: *"The test that tested my abilities (aptitude test, GRT2) really helped, it showed me that I have the ability to go into the medical field."* - Kayla (first follow-up)

Here, both Tobias and Kayla highlight the valuable role of the career assessment. Tobias appears to have developed a clearer perspective to pursue honours and Kayla seemed clear on her ability to pursue a degree in the medical field. It is interesting to note that Kayla placed emphasis on the "abilities" of scholars.

The following excerpt from Li-Fen in response to the usefulness of the career assessment provides a helpful example of how psychometric assessment assists in the career guidance process:

I would say that it was quite useful in the sense that it definitely pointed me towards a general direction of a job. I think one of the jobs listed there was like editor, so, by looking at that I know that I was doing something related to that like Literature but definitely not something related to maths or numbers or biology or science and that's not really what I am interested in and what I am suited for so from there I slowly changed and adapted, ja. Li-Fen (final follow-up)

From her words, we can see that Li-Fen made several connections from the guidance received from the career assessment, she refers to specific career options and linked these to her studies and reflects on how this assisted her in her career decision-making during her undergraduate studies.

The above excerpts from participants illustrate the valuable roles of career assessments. The majority of participants made several links and connections between the guidance from their career assessment reports and their study options. From these findings, we can see that the career assessment helped contribute to clarifying knowledge about the self, generating options, and information-seeking behaviour (Sampson et al., 2015).

Links between personality and interest

This theme reflects the value of adding a personality test to the career assessment battery. According to Holland (1997), an individual's vocational interests is an expression of his or her personality. The implication of this position is that when we are measuring interests, we are tapping into similar underlying constructs as when we are measuring personality. Through measuring interests, we are also measuring aspects of the expression of personality (Spokane et al., 2002). In this sense, this theme links to and overlaps with the value of career interest inventories used in this study. The following excerpts support this point: *"It also helped me to understand my personality better, the kind of person I am."* - Thobile (first follow-up).

"And the personality test, in terms of what I see as important to me." - Busi (final follow-up)

"It gave me a better understanding of myself because I wasn't sure. I'm happy with what I'm doing, with my courses and major." - Li-Fen (1st follow-up)

Here, Thobile, Busi and Li-Fen reflect on how the assessment provided an opportunity for self-insight and how this has assisted Li-Fen, in being content with her majors. This seems to reflect the opinions of most participants, illustrating that it facilitates a better understanding of self and assists in identifying one's career interests. Llewellyn, Faith and Tobias reflect this in the excerpts below:

"The personality test was really interesting in understanding myself and how this is aligned with my career interest." - Llewellyn (final follow-up)

"The personality test was helpful as it gave me insight into understanding myself better and how this relates with my interest." - Faith (1st follow-up).

"I found the process very long but it gave me a lot of insight about my personality and how this relates to my current subjects and interests." - Tobias (first follow-up).

Tobias had undertaken a career assessment prior to this study, it is interesting to note that he also recognised the value thereof as reflected in the above excerpt. Similarly, Chrystal has done career assessments prior to this study. She had this to say:

The tests were quite standard to what I've done before. There were a few different ones that I haven't done, maybe one or two but pretty much standard to what I've done before. Ja they were quite accurate in terms of what it said about me, who I am as a person. I know I like to work with people so that came up as well. - Chrystal (first follow-up).

Here, Chrystal highlights seeing links with the standard career assessment battery used by practitioners in the field and how she found this assessment on par with previous assessments and reflects on the accuracy of this assessment.

Participants also reflect on the value of the feedback (written or verbal) received on their career assessments. Tamia had this to say: *“I found the one on my personality interest very valuable and it was well explained to me, I really appreciated having this on paper, it helped me understand myself better.”* - Tamia (first follow-up)

Sideeq said: *“The feedback helped me understand myself better.”* - Sideeq (first follow-up)

Both Tamia and Sideeq’s impressions of the feedback provided to them were positive, assisting with a greater understanding of self as reflected in the excerpts above. This theme and the above excerpt highlight an important goal of the career assessment process, that individuals develop a deeper self-understanding. Career assessment may serve to confirm a client’s self-view, and provide new possibilities on how they see themselves and that individuals seek to make career choices that are consistent with the way in which they view themselves (De Bruin & De Bruin, 2017).

Values

Commentary about these is noteworthy since the assessment process provides an opportunity for participants to step back and view their interests, values, and personality characteristics in an objective manner (De Bruin & De Bruin, 2017). Three participants overtly mentioned values, for example Tamia had this to say:

There was one that looked like my values and I found that one really interesting because it is like uhm it kind of puts my values into words. I thought that was nice because I agreed with a lot of that and thought that it was quite accurate and hadn't put that into words so that helped quite a lot to understand myself better. - Tamia (final follow-up).

Tamia reflects on the value inventory with much appreciation and appreciates seeing her values in writing. Faith reflects similarly: *“I am aware of my values and to have it on paper like that is really nice and affirming.”* - Faith (first follow-up).

Career assessment also makes links to external factors that may guide the client’s career exploration process, by narrowing down or broadening the range of occupations to consider (De Bruin & De Bruin, 2017); this is reflected in the following excerpts by Busi and Tamia: *“and what I don't really value, you know, especially in a workplace and things that I really value in*

a workplace.” - Busi (final follow-up). Busi reflected on values in relation to the workplace.

Tamia also said:

Even with things like the interpersonal values it even touched on things like uhm my main value is altruism, like I would look for companionship in my life and not just looking for a job as well so that is also helpful because that is like oh that makes sense because your career is not like your 9 to 5 job there are more things to consider, it's more of what things do you want, what hours do you want to work, do I want a family, it's helpful in that it doesn't limit to what happens during working hours, it's broader than that. - Tamia (final follow-up).

Tamia illustrates that the process encouraged her to think more broadly about the links between career choices and other elements in her life. This evidence supports the statement: “The efficacy of the assessment process may be judged by the degree to which it promotes exploratory behaviour in clients” (De Bruin & De Bruin, 2017, p.187). In the excerpts above, both Tamia and Busi reflect on their values in relation to the career exploration process, highlighting both personal and work values.

Clarity and Confirmation

Participants reported that the assessment provided clarity and confirmation on what they are interested in and what they would like to study. Naomi explained:

Aah I knew from the beginning that I was not meant to study, like, I'm not a theoretical person, I'm more of a practical person and the assessment report said the same thing. So, somewhat it did align. I think I had an idea of what I wanted to do but I just wasn't sure so it really gave me clarity. - Naomi (final follow-up).

Naomi reflects on her previous uncertainty and that the assessment assisted her in gaining clarity. She further reports that she would have appreciated this feedback earlier on in her studies as reflected by the excerpt: “If I was able to get the results earlier, I think it would have had an influence on what I decided to do with my indecisiveness. It would have helped a bit, ja.”- Naomi (first follow-up).

Sideeq was uncertain about what to pursue, he indicated that he had a passion for hockey but was conflicted about this. He reports that the assessment provided clarity and confirmed his interests, as reflected in the excerpt: “The career test and feedback was very helpful, it is more clear to me what I want...I'm coaching hockey at the school and I'm enjoying it.”- Sideeq (first follow-up).

Tamia reported that the assessment encouraged her to work hard and focus and that it boosted her confidence. *"The assessment encourages me to work hard and to think more about the future. It solidified and highlighted a lot for me. It boosted my confidence and affirmed my decisions."*- Tamia (6 months follow-up).

Tamia further reflected that the career assessment assisted her with deeper clarity that she would like to work in an environment where she can interact with others and not solely work with large statistics in isolation:

The assessment definitely helped, I realised I was a lot more focused than I had thought and so I realized that a normal stats job working with stats and a large amount of data and not really interacting with people wouldn't really be something that I would want to do long term. It narrowed that down a bit - Tamia (final follow-up).

Tobias reported that he was conflicted and uncertain about his career choice and needed clarity and guidance on his career plans. Tobias illustrated how the process helped him consider other options:

So I thought like, actually I haven't done a career assessment since I was in Grade 11. So I was like let me do one since I am wondering why am I doing this degree. And it said the same thing, that I shouldn't be in science and I should be more in economics, management and all of that the career assessment affirmed that maybe I am going down the wrong choice, maybe whatever job I am going to take I should rear off like Information systems you don't have to do coding, you can be like an analyst. - Tobias (final follow-up)

Tobias further reflected that all the career assessment tests were helpful in providing various insights for him:

Recommendations were most useful, the test was helpful, to see my score, and what I scored high in. The career chart confirmed a few things (me being persuasive in nature), and the personality assessment confirmed what I thought I would get. - Tobias (final follow-up).

Faith reports that she had never really reflected on her personality and her strengths to identify what would best suit her. The assessment provided her with confirmation and clarity on her studies and greater self-understanding. Faith said:

The marks I got for Economics was an affirmation and in conjunction with the career centre. Aah, I was never bad at it or really good at it until I really applied myself to the

course, and also at the career centre, I went there because I had a lot of things I was good at. I had not necessarily sat down and looked at my experience and personality to see what works for what and that helped with that process. Because it gives you, like an objective understanding of what you are doing and why, like an overview outside of myself, like who am I. What are my strengths? Where am I best fit, and it was just a matter of narrowing it down from there. - Faith (final follow-up).

The excerpts support the assumption that interest inventories assist to identify the interest of which clients were not aware, confirming the client's stated interests and identifying discrepancies between abilities and interests (MacAleese, 1984).

The above quotation illustrates the various elements that impact career decision-making; and the value of opportunities for reflection on these. The role of psychometric assessment in career counselling assessment can be valuable in this regard by helping participants recognise their strengths, interest and abilities that can be applied in many different contexts including work-related (De Bruin & De Bruin, 2013). Career tests provide students with information most typically of their likes and dislikes related to work and education. Counsellors and students use these results to help students with their career planning and decision-making (Hartung, 2010). Career assessment enhances self-knowledge, improves problem-solving skills and increases the participants' knowledge about the world of work (Zunker, 2012). The above also indicates that values and interests are important because individuals seek to find working environments that satisfy their psychological needs (De Bruin & De Bruin, 2013).

Responses to research question 2

The following themes were identified: Role models, friends and family, early career guidance, prior experience and exposure, Open Days and Orientation week (O-week), interest and passion, subject preferences, research, barriers to access and job security and financial reward.

Role models, friends and family

Naomi, Lelo, Sideeq, Kayla and Tobias highlighted family members and role models as factors that impact and assisted in the career decision-making process. Naomi's siblings went to a University in the Eastern Cape. Although this was not her first choice, she applied to the same university and later enrolled in a BSocSc, a similar degree to that of her sister. Naomi shared:

At home, I have three sisters, two applied to Rhodes and got into Rhodes. One did her bachelors in Journalism and the other one did a Bachelor in Social Science... Me

applying to Rhodes wasn't even like my first choice. It was like let me just apply and see what I can do. - Naomi (first follow-up).

Similarly, her brothers and what she had been exposed to influenced Busi's possible career choices: *"Actually my dream job was wanting to be a Chef and then Geology came after "* - Busi (final follow-up). Busi's brother is a culinary student. After being excluded from university, Busi managed to obtain work at a call centre. Busi's older brother is working at a call centre. This is an example of how individuals' frames of reference and what they know impact career decision-making and how individuals look up to family members as role models for possible careers to consider. As a further example, it is also interesting to note how Sideeq refers to his family, his grandfather when asked about his interest in accounting: *"I think it comes from my mom's side because my granddad was pretty good in numbers so I might have got that from his side."* - Sideeq (final follow-up).

Likewise, Kayla was undecided about whether to pursue accounting or medicine. She is passionate about medicine but kept her options open. She reports that her interest to pursue accounting was influenced by her family members. Kayla said: *"I upgraded both my mathematics and accounting marks because I was keeping my options open to maybe do accounting. Me wanting to do accounting was influenced by my brother and aunt who is also a chartered accountant."* - Kayla (first follow-up). Kayla further reported that the support she received from family and friends played a significant role in her career decision-making. She explained:

Also, the support from my family and friends, I know they are supporting me, especially my family. What really helped me decide to go into medicine was the advice from my parents. They said I must choose something that will make me happy because when it is not nice at work they won't be there, so I must choose something that I like - Kayla (first follow-up).

Kayla stayed with her grandmother, it is interesting to note how her grandmother's occupation influenced her career decision-making process, and she shared: *"I would say my grandmother also, seeing how it is to work in the hospital because she was a nurse, this also influenced my decision, yes."* - Kayla (first follow-up).

Role models were also an influential factor that assisted Kayla in her career decision-making process. She shared that, whilst upgrading her marks, part of the programme include exposure to guest speakers who motivated her to pursue medicine:

We had guest speakers that came to speak to us who were also part of the upgrading programme. They encourage us, especially those that are now doctors. They shared their experience with us on how they made it and that they were also like us, in the programme because of their marks. This motivated me more to go into medicine. - Kayla (final follow-up)

Lelo's mother played an influential role in her career-decision making process: "*My mother is my role model, she is a politician*" Lelo expressed: "*I would like to give back and build communities. I have seen the value of this and would like to do the same.*" - Lelo (intake interview). It is interesting to note that Lelo selected Politics as one of her majors and makes reference to her mother's work, to give back to the community as one of her career goals.

The impact of friends and family in the career decision-making process was highlighted by Faith. She shared that exposure to the business fields and what a possible career in the business field would look like came from being exposed to friends and family who pursued the business field. She reported that this assisted in her decision to pursue business instead of Law. Faith said:

Also, being exposed to friends and their family members in the business field also helped me decide and get an understanding of the business field. I could get more information about the field, how it works and also what that would look like for me, how I could develop my career in the business field. - Faith (first follow-up).

Similarly, Tobias shared that his decision to select Computer Science as a major was influenced by his friend and father. He noted:

My friend actually referred me to Computer Science, now he is running away from it, now I am stuck here... My friend was in the same class as me, in my first year, like the first semester. And then everything was confusing and I really wanted to go into business and I thought maybe there will be like a learning curve or something and I just carried on, my father also told me to take it and that I would like it. - Tobias (first follow-up).

Tobias has an interest in the business field and took up Economics as well. He did very well and received acknowledgements for his good performance from the head of the department. We reflected on this and Tobias shared that he would like to pursue a more business-like field but this decision was influenced by his parents:

My mom was like, you see, you should have done Economics. I was like, I should have, I could have, but I didn't. And I didn't carry on with it and my other friend carried on

with it and I didn't. And she said I could carry on with it, economics. My dad was like when you leave and finish your degree you can go and do your business degree. That was his stance on it. You can still do another degree but you are doing this one first. - Tobias (final follow-up)

The above excerpts describe the noteworthy impact of role models, friends and family members on participants as factors that impact the career decision-making process.

Early career guidance

Exposure to early career guidance was highlighted as an important factor that assists participants with their career decision-making process. Busi traced her exposure to early career guidance as far back as primary school: *"I was speaking to my teachers also. Even in primary school, I was already speaking to my teachers about options on careers and stuff like that."* - Busi (final follow-up).

Similarly, Li-Fen described that her Grade 12 English teachers introduced and exposed her to Classics and Linguistics, she said: *"It was only at the end of Grade 12 where I thought about Classics and Linguistics and I only thought of it then because my English teacher in Grade 12 told me that she thinks I would be quite suitable for Classics."* - Li-fen (Final follow-up).

It is interesting to note that Li-Fen took Classics and Linguistics as her major subjects. This highlights the impact of early career guidance on students' career decision-making processes. Faith comments on learners' lack of readiness for career decisions at the end of school:

Because I don't think making decisions from your matric understanding of yourself make sense. In the bigger scheme of things. Now you are stuck in a career that your 18-year-old self had in mind, now you are a different person at age 21, 23. - Faith (final follow-up)

John further highlights the lack of readiness to make a career decision at the end of matric:

I feel like everyone is just expected to have a direction in their head but I feel like the schools aren't, they not giving you all the options, they limit you quite badly I feel, (sigh) and now you have so many kids in the schools and everyone is doing the same subjects and now everyone must decide. There are these options and you have to choose from these basically. Where in actual fact there is so much more than what they tell you and what they portray in school, ja...I feel like (sigh) ...talents and interests need to be identified and developed because there, there are so many different routes to take in life, there are so many things to do. Hmm and I feel lots of people have different talents but I feel like the schools, I even went to XXX college but I feel they

didn't develop any of my skills and interest (sigh) they left me quite confused. - John (final follow-up)

John further explains:

I feel like there, more guidance is needed because as a person coming out of matric now, you just need some guidance in some form of way, ja, because I didn't have much guidance... I got so many interests and none of it was ever developed by anyone. - John (final follow-up).

John further explains the importance of early career guidance and the impact of many students who receive little to no career counselling (Maree, 2012).

To be honest I had no idea what I was looking for, ja, I had no idea what to look for, what I was thinking. To be honest I basically just chose a degree because I had to basically. Hmm, and I feel that that was the completely wrong thing to do because hmm I wasn't made aware of, ja I didn't have any insight into university degrees, what it all entails, where it will take you and I feel like ja, my lack of insight into that just made everything just worse. Ere I didn't know what to choose basically, so I was very lost at that point. I wish there was a different system at school, almost. Ja, I was quite lost and to be honest, I am still lost. - John (final follow-up).

The importance of early career guidance is also emphasised by Tobias and Busi, how this can impact students' subject choices and how this can assist in the career decision-making process. Tobias explained how conflicted he was when he had to decide on a degree to pursue at university:

But already it was too late because I already chose my subjects (in high schools) that were not Business-minded but more physical science, like Chemistry, Life Sciences, the only thing that was close to it was maybe history and it was like a middle ground, not a science subject. Then I ended up applying for Engineering and applying for Law somewhere else and just mixed and muddled up choices. And finally, Rhodes replied and then it was like why you don't just change. I think I applied for chemistry something weird and it was why don't you just like change it to computer science - Tobias (final follow-up).

In addition, Tobias also highlight the importance of obtaining early career guidance in the excerpt below where he explained that his career decision was rushed, Tobias said: "My decision to do IS and Computer Science was rushed, I wasn't sure on what to take, what

subjects to choose.... so my decision was rushed, I wasn't sure, it was influenced by my friend and also my father.” - Tobias (first follow-up).

Chrystal, who registered for a BSocSc at Rhodes University, further reflects the impact of early-career guidance: *“I did a career assessment before coming to Rhodes and it said I must go to Rhodes and do a Bachelors in Social Science.” - Chrystal (first follow-up).*

The theme of early career guidance also has revealed the career guidance prospective students and first-year students receive at university before they make a final decision on what to study. Kayla and Faith highlight the value of early career guidance and how this assists students in their career decision-making process. Kayla noted: *“What further assisted me is the career guidance I received. This really helped in identifying and kind of confirmed my interest. I was so fortunate to have had this opportunity” - Kayla (first follow-up).*

Faith commented on the available support of others in the system:

Aah, you know what, this is the great thing about Rhodes, they have a very nice residence and Oppidan system where there's committees and people like that. Having people to talk about what you want to study goes a long way and not just talking about it when you actually register. Like there's like academic counsellor responsibility (SRCS Academic counsellor, academic representative in the residence system) and they like highlighting things for you, you know, you can go to the career centre and ask for advice and guidance from the beginning. - Faith (final follow-up).

Here, participants highlight that receiving career guidance before applying and registering for a degree assists with their career decision-making process.

Busi liked the Science subjects in high school and obtained very high marks in the Science subjects compared to other subjects and was set on pursuing a degree in Geology. However, things did not go as planned. Busi said:

At that time I wasn't sure if Geology was the correct career for me because things were not really going well in terms of my marks and everything. So I thought maybe there is something wrong, maybe I am not suited for it. Because I was trying but things were not happening or the way I wanted it to happen. - Busi (final follow-up).

Busi was struggling with Geology and was financially excluded from university. Here, both Tobias and Busi's excerpts highlight the importance of receiving early career guidance and how this can assist in identifying subject preferences and assist with the career decision-making process.

Busi further highlights the importance of early career guidance and shared that early-career guidance provides an opportunity for self-reflection, realistically looking at your career options and working towards your goals. She said:

I wish people could understand that it is better to come in the beginning rather than when you are in a place where you really don't know what to do, to rather come in the beginning. So you have an understanding and also just I wish people could have that curiosity you know, a curiosity that can lead them to ask questions. like you know, the personality test, yes, so that you can understand ... so that you can learn, adjust things about yourself and work for what you want to do and also, it is that thing like I said, it also help you to be realistic about things. - Busi (final follow-up).

Participants highlight the importance of obtaining early-career guidance and how this significantly influences students' career decision-making process. Early career guidance can assist with self-awareness to an extent where individuals are able to match their own career relevant interest, attitudes, values, needs, motives and strengths with features of work (Weng & McElroy, 2010). Career adaptability or adaptability is associated with young and emergent adults' readiness for making career decisions (Schreuder & Coetzee, 2016), thus early career guidance is important as indicated by the above excerpts.

Prior experience and exposure

The impact of prior work experience and exposure was highlighted by participants as they reflect on the question: What factors played a role in assisting you to select your current subjects and assist you with your career decision-making process? Tamia and John made reference to their upbringing, and how being exposed to family business has influenced and assisted them with their career decision-making process. Tamia had this to say:

I think there are a lot of things that I have been exposed to that I can say, I like this or I don't like this, due to being a functional part of the family business and not a lot of people have that. Being exposed to a business and how the working world works. I grew up in a B&B, my mother owned a B&B so I grew up being able to talk to people, like make conversations with adults all the time, so I had this skills set where I could communicate with people from all ages and backgrounds and find it easy to connect with people and I could do that in a professional manner. - Tamia (final follow-up).

Here, Tamia reflects how her upbringing and prior exposure assisted her to develop personal skills and interact with different kinds of people. She further reflects on how this experience and exposure fostered her interest to work with people and assisted her with her career decision-making process. She shared:

I like working with people but then I didn't want to do anything medical, specifically, where I have to work in a hospital or with sick people because I don't like hospitals and with a lot of them you have to work in a hospital before you qualify. I job shadowed and I fainted because of the blood and smell and everything and I didn't like it. But HKE still gives the option of working with people but in a much more practical sense where there are a lot more options than you can go into and it is less medical but more holistic, so I really like that and this is the only university that has that. And I enjoyed Sciences at school. And I narrowed it down as I found out more info. - Tamia (first follow-up).

John also disclosed how being exposed to the family business might have fostered his interest in the business field. He commented:

I spent a lot of time, even in school, I would come home from school at night and I would go straight to the bakery. And I would bake my mom's cake for the next day and she would decorate them. Hmm and I've always been involved since I think my Grade 9 year, I was involved in the bakery quite heavily and I am still involved here and there, ja, that might have been contributed. - John (final follow-up).

Chrystal, Tamia and Sideeq highlighted their own previous experiences and how this also influential in their career decision-making. Chrystal's decision to pursue the teaching profession was influenced by being exposed to an online teaching work opportunity during COVID-19 as well as participating in different societies and clubs at a previous university. She reflects:

So, I'm doing the foundation phase and I'm really enjoying it. I wasn't sure if I was going to enjoy it but I am teaching online now with COVID-19, it kinda opened it up for online teaching and I'm enjoying it" Chrystal also reported that "enrolling in different societies and associations at Rhodes University really helped me to see what I enjoy and what I really like to do. - Chrystal (final follow-up).

Tamia reports that working in the hostel (as what is known as a "stooge") linked to a school provided exposure to the educational setting and solidified her interests to work in the education environment. In the following excerpt, Tamia explains more detail of what she has learnt:

Well, I've been working as a stooge at a school this year, so I had an idea that I wanted to be involved in education and it's helped me solidify that more being in a school environment. It helped me see the ins and outs of how an education institution is run.

...I've been looking out for opportunities to build myself up in that way even if it is not directly related to my career. - Tamia (final follow-up).

Similarly, Sideeq noted that his exposure and interest in hockey were further developed when he was playing and coaching hockey. He also explained that prior exposure to sitting and doing work that he enjoyed and missed, assisted him in his decision to pursue accounting:

For me, it's been something that I enjoy. I've been exposed to a bit more, I've been exposed to working as a coach and playing sports and how I actually miss the work, like sitting down and actually doing some work. - Sideeq (final follow-up).

As a final example Faith's exposure to her friend's uncle's work, who did both Law and Economics, assisted her with her career decision-making process and broadened her understanding of how these majors could be implemented in the workplace in a variety of ways. Faith notes:

Honestly it was just vibes, (laughter) because no, no, I had a friend who had an uncle who worked at what I wanted to be. He did Law and Economics but I hadn't realised how much work you can do outside of that. Yes, a family friend, my friend's uncle, ja. – Faith (final follow-up).

The above examples illustrate the different ways in which both exposure to work through family and friends, as well as personal experiences of the environments and types of work required in settings, are influential in career decision-making.

Open Days and O-week

O-week was indicated by participants as were guidance and assistance in the career decision-making process. The information obtained during orientation for academic purposes as well as involvement in extracurricular activities provides students with a wide variety of options to choose from and provides an opportunity to identify what they like and what they are interested in. Chrystal and Thobile explained as follows:

The best things that I've ever seen and attended were those lectures in my first year during O-week that was really amazing. I remember going to many of those and I got a lot of information on different courses, Ja, that really helped" I also joined many of societies, I remember I was part of the Greek society, I did boxing and canoeing, I also joined the First Aid, this helped me to see what I like. - Chrystal (final follow-up).

Thobile notes:

What is helpful is also to attend as many orientation lectures as you can, to open yourself up to other fields, this is very helpful in deciding and seeing what you can take that is interesting and what you like, what you would want to do for a career. - Thobile (first follow-up).

Llewellyn further described the value of O-week and emphasised that career decisions should not be rushed:

As a first-year one is limited in your exposure to career knowledge and an opportunity to widen once knowledge in the different fields is helpful. The process should not be rushed, to take the pressure off because you are still at a very young age to make such decisions - Llewellyn (final follow-up).

Similarly, Kayla highlighted the importance of orientation week/open days and how this assisted her with her career choice. She said: *"Open days are important and can help you decide, even if you only attend one. This helped me..."* - Kayla (first follow-up).

Likewise, although Busi arrived late at the university, she managed to attend orientation week and found the process helpful. Busi commented: *"I attended the last 3 days of O-week because I arrived late... But I didn't change any course or any subject"* - Busi (final follow-up). It is interesting to note that Busi did not change any subjects in response to what she heard in O-week and placed emphasis on this. This is because some students tend to change their subjects as they obtain more information on a particular course and some are still uncertain and would prefer to keep their options open. Tamia gave examples related to keeping her options open as follows:

Once I decided to do HKE, I went to the Dean or people that could give advice during O-week and they looked at my matric results and I gave them some options of what I was thinking of and then they helped me decide on which subjects to take...but it was down to Maths, Stats and Science. I took Chemistry in case I wanted to do Biochemistry and at that stage, it was about keeping my options open and seeing throughout the year which one's I preferred and what I could see myself doing in the future. - Tamia (first follow-up).

The above excerpts suggest that O-week are important factors that assist participants in their career decision-making process. Participants also comment on the utility of Open days as a platform that can aid in the career decision-making process. Open days are a platform where institutions of HE invite school learners to visit their campuses and inform learners of the various opportunities they can pursue after school. Another platform for Open days is where different

organisations (i.e., Aviation, Defence force, NGOs) and employment companies go to schools to inform learners of the various work-related opportunities they can pursue after school.

Interest and passion

The majority of participants reported that following their interests and passions influenced their career decisions over the course of undergraduate studies. It is interesting to recognise how participants' interests developed over time, and how a broader self-understanding facilitated the career exploration process by narrowing down career directions to consider. For example, Naomi originally selected Psychology and Human Kinetics and Ergonomics as her majors but over time developed a keen interest in Organisational Psychology. She had this to say:

Honestly I thought I was going to continue with general Psych but then I just found Org psych more interesting because I think I was trying to head into a more Physiotherapy root but I found Org psych more interesting so I thought ok, I can use my Ergonomics alongside Org psych that's why I continued with both these majors. - Naomi (final follow-up)

Li-Fen selected Psychology and Linguistics as her majors and Classics and German studies as her minors but over time, she discovered that she was more passionate about Classical studies:

Linguistics mostly came as a personal interest as I wanted to see how languages work and also because I am bilingual I am very interested in the mechanical part of language. I ask myself if Linguistics is really something that I will be able to do for the rest of my life and ah, I found that compared to Linguistics, Classics is more suitable for me in terms of my personality because I am more of an Introvert... I am quite good with hmm examining text and analysing and understanding ideas. - Li-Fen (final follow-up)

Lelo registered for a Bachelor in Journalism and selected Politics and Linguistics as well as Chinese studies. She expressed an interest in travel after her studies and to pursue a career where she would like to develop others and give back to the community. Over the course of her undergraduate studies, she decided to complete a Postgraduate Certificate in Education. *"I decided to go into teaching, which would be a great way to combine my Linguistic skills and love of travel. So I'm considering applying to teach English in Korea, Japan or China. I'm also considering studying further."* - Lelo (final follow-up).

Busi registered for Geology and expressed her passion for the field, she said:

I chose Geology because I had a passion for it, to be honest. And I just loved it, yes. I like the Sciences and because I had a dream, a purpose why I was doing it, not only for me, but I know I wanted to help other people, also help communities. - Busi (final follow-up).

Busi was struggling academically and after being excluded from University, she discovered a new interest that she is pursuing: *"I plan to obtain a diploma in nail technology with a loan as it has been a new interest of mine. Hopefully, I do get approved for the loan so I can be able to have some direction."* - Busi (6 months follow-up).

The above excerpts are indicative of how participants' interests developed over time, and how a broader self-understanding facilitates the career exploration process by narrowing down career interests and assisting participants in identifying new passions. This is further emphasised by Chrystal, Tamia, Thobile, Sideeq and John. Chrystal registered for a BSocSc majoring in Psychology and selected Management because she had expressed a keen interest in working with people. She fell ill and had to discontinue her studies. This period where she discontinued her studies provided time for self-reflection Chrystal later decided to follow her passion for teaching: *"I had health issues and I was really struggling to cope so I moved closer to home... I enrolled at a varsity closer to home. I am studying teaching now. I always wanted to go into teaching."* - Chrystal (final follow-up).

During her undergraduate studies, Tamia took up a job as warden at a local school. This opportunity exposed her to the educational environment and helped to solidify her career interest and passion to work within the education system. She had this to say:

I don't plan on becoming a teacher but I do want to be involved in research in education hmm so that definitely helped me in my decision and sort of solidifying the trajectory of my career decisions and choices, from working at the school. - Tamia (final follow-up).

Thobile registered initially for a B.Com (Law) degree. When asked what assisted her to select Business Studies over pursuing a Law degree, she said: *"I would say that I stuck to my dominant interest, we all have this; that one interest and I would say that it's important to stick to this. For me, it's always been an interest in business."* - Thobile (first follow-up).

Sideeq took a gap year and coached hockey at a local school. In a final follow-up session, he reported that he narrowed down his passion and decided to apply for Accounting and Information Technology and to continue to play and coach hockey. He explained:

I've applied for Accounting and IT. Because I seem to enjoy working with numbers more, I am pretty good at that. It is something that I miss doing. I am still currently

playing hockey and coaching and currently playing for the Rhodes club. If I am still in Grahamstown next year, I will still continue to play for Rhodes club. - Sideeq (Final follow-up)

John registered for a BSc degree to improve his marks and to gain entry requirements to pursue Engineering at another institution. He continued with his studies in BSC up until his second year and discontinued this degree due to disinterest in pure Mathematics and Science. He continued to help with his family business and enrolled in a Business Studies degree in which his skills could be applied better and reports that he is enjoying this. Following a final follow-up, John reflected on his career trajectory: *"I'd love to, well at the moment I am very interested in the financial market. I'm looking into that quite a bit so I see myself growing in the direction of investing and so on."* - John (final follow-up).

The above excerpts delineate the influence of interest and passions and how these impact and influence students' career decision-making process.

Subject preferences

This theme relates to the importance of subject preferences and the impact thereof on participants' decision-making when selecting a particular degree and major. The majority of participants select major subjects based on interest, natural talent, subjects that they enjoy as well as subjects they perceive as being easy subjects. Naomi noted how finding Organisational Psychology easier than General Psychology was an advantage for her: *"I found myself passing semester one better than semester two, so I thought Org Psych is much more manageable than Gen Psych."* - Naomi (first follow-up); *"so I enjoy Org Psych because it was easy."* - Naomi (final follow-up). Busi, a comment like mine above: *"I always liked Natural Sciences because that was the subject I was passing the most and Sciences."* - Busi (final follow-up). Tamia as above: *"I had no interest in BCom Business and Accounting at school and had more interest in Science subjects so I chose BSc So natural talent, abilities and interest impacted a lot in my subject choices."* - Tamia (first follow-up).

Both Li-Fen and Faith developed further interest in their major subjects and will continue to study further. Li-Fen explained:

Last year I realised that I quite like classics and it is something I would be able to do, to keep on learning for a long time and not getting bored, so I have decided to continue to put my career development in classical studies... Next, I would like to apply to the Beijing University in China and study Chinese Philology - Li-Fen (final follow-up).

Faith will be pursuing a post-graduate degree that will combine both her interest in Law and Business. She noted:

I'll be moving abroad to do like a joint honours, International Law and International Business. Because I remember I spoke to her and I was like I am good in both Business and Economics and it feels like I should choose one over the other and now I kinda like found a course that merges the two, from our conversation at the career centre. So this degree merges the two and it was my first time hearing about it ...it's only abroad where you really get it like this - Faith (final follow-up).

Similar to Li-Fen and Faith, Tobias identified his interest in Business studies during his undergraduate studies and would like to further his studies into a Business degree but he is also discouraged by the essay nature of a Business degree. He explained:

I did Economics last year and I got my marks back and the head of the department emailed me to say that you are in the top 7%. But what makes me run away from those business subjects is the essays. Yes, that's why I do like Science subjects, like numbers, that's how much I don't like reading and writing... You see, like I can explain everything in ten sentences, now I need like a hundred sentences to explain something. - Tobias (final follow-up).

John registered for a BSc degree but discontinued it because he was not enjoying the subjects and later identified that he has an interest in Business studies. This is reflected in the two excerpts below:

But I also feel like I can do those extreme Science subjects but I don't enjoy that at all. Hmm so I decided to rather move away from that and Ja, I must say I probably didn't work hard enough on those subjects in my first year of BSc but I feel like it wasn't an enjoyable experience so I decided to move away from that. - John (final follow-up).

He further described how he went about deciding to pursue a Business degree,

I guess it was my next best option. I wasn't interested in Art, Music or Journalism or anything like writing, Politics, ja, I feel like I have a good Business mind, so I was like let me go into Commerce and see what it is all about..., I feel it works with me, I will continue to do that. - John (final follow-up).

The excerpts highlight the importance of subject preferences and the impact thereof on participants' career decision-making process when selecting a particular degree and major subjects.

Information gained from personal research

For most participants, doing research provided them with more information about their interest in subjects and degree and provided guidance on their career trajectory. Participants also highlighted the importance of doing research early, before university and how this assists them in their career decision-making process. Kayla, Naomi and John share this. Kayla explained:

Grade 12 is very late to decide what you would like to study. I did my research early, I knew in Grade 10 that I wanted to go into medicine. So I would say doing research is very important as it assists in making an informed decision. - Kayla (first follow-up).

Busi report: *"I did my research on Geology like before Grade 12 even, like Grade 10 and then I started to do my research on the careers on what I can do."* - Busi (final follow-up). John reflected on his decision to pursue an Engineering degree as follows:

Hmm I was always looking into Engineering, I was thinking well what is the big issue? I had to choose something so I was thinking to myself water is the big issue in the country so If I was to become a Civil Engineer and specialise in water or something like that it would open lots of possibilities and hmm ja, stuff obviously didn't go as planned. - John (final follow-up).

In the excerpt below, Naomi was uncertain about her degree choice and explained why she selected the faculty of Humanities, she said:

I just wanted a faculty which would be very flexible and not like streamed, you know... for me to have the freedom to understand what I wanted so ja. So I could figure out what exactly I wanted to do that's why I was like let me just do Humanities because at least there I can figure out what I like. - Naomi (first follow-up)

The faculty of Humanities provided her with the flexibility to understand herself, do research and identify what she would like to study. Naomi further explained that reading up on her majors assists her in her career decision-making process: *"Also reading up on my majors and doing some research helped me gain an understanding of my career interests and assisted me in affirming that I am pursuing a degree that is aligned with my interest."* - Naomi (first follow-up).

Similarly, Faith explained that reading up on women in the business field that she can relate to assisted her in deciding to pursue a degree in the Business field.

I decided to go into the Business field. What influenced my decision was reading up on women, like powerful women that are pursuing their careers in the Business field,

particularly women that looked like me, that I can relate to, this is quite encouraging. - Faith (first follow-up).

Doing research was also identified by Li-Fen as an important factor that assisted her to select her university subjects. *"I was looking at all kinds of subjects you can do at university and I came across Linguistics and Classics. I never thought those were things that you can study as a subject then I became interested, ja."* - Li-Fen (final follow-up). Li-Fen later explained the importance of research and how this assisted her to decide between Classics and Linguistics. Li-Fen explained: *...and with Linguistics, you need to do quite a lot of fieldwork, investigating and you have to talk to other people and conduct interviews and that is not really where I flourish."* - Li-fen (final follow-up).

Sideeq took a gap year, after exploring his interest and explained that doing research has assisted him in his career decision-making process. He explained:

after that, I was exposed to more things, more options so I think it was more research on different things, so it just gave me a few more options to choose from. I looked into other things. I did a coaching course at the beginning of the year. Because I was also looking into teaching and that. - Sideeq (final follow-up).

The above experts highlight the important role of research in assisting students in their career decision-making process.

Barriers to access

Socio-economic factors and entry requirements were highlighted as factors that impact and influence students' career decision-making process. Obtaining funding for studies influenced Faith and Busi career trajectories. This was explained by Faith in a final follow-up where she reflects on the importance of obtaining funding and working hard to meet entry requirements to study further.

I got a scholarship to study Economics and Business Studies. Can you imagine full funding in this economy! It was really God's grace. Remember when you called me, the mental state I was in... I never really got distinctions but I did very well academically. I don't want to lie it wasn't easy but it was relatively easy with Economics. - Faith (final follow-up).

Similarly, Busi started university late as she was also waiting on funding. She said: *"I arrived late. I didn't know if I had funding. I found out later. They sent me the message late to say ok, you can come."* - Busi (final follow-up). Busi further highlights the impact of funding and meeting

academic requirements, she explained that she did not do well academically and therefore funding was discontinued:

Unfortunately, what I had predicted has happened. I did fail and I lost my funding... I also plan on applying to other universities so that I can start over with the degree that I was doing at Rhodes. I will have to apply for funding for that again from NSFAS and bursaries. - Busi (6 months follow-up).

In addition to funding as a socio-economic factor that impacts students' career trajectories, the importance of meeting entry requirements is also highlighted by Busi, John and Kayla. Busi explained:

in high school, I wasn't passing to the level that I wanted to pass. I wanted more options. With Geology, you do Physics and Geography but you have to pass Physics and Mathematics which weren't the highest marks for me, I was just average but I really pushed and I worked hard because I knew I had to get the marks that I got. - Busi (final follow-up).

Kayla also reflects on the influence of entry grades: "My *Mathematics marks were not good enough to allow me to enter into the medical field. I enrolled in the upgrading programme ...to improve my marks so I can enter into the medical field.*" - Kayla (first follow-up).

Both Busi and Kayla wanted to pursue a specific degree but did not meet entry requirements. Likewise, this is also true for John who did not meet the entry requirement to pursue Engineering but enrolled in a BSc to obtain entry requirements to register for Engineering. John shared:

I started with a BSc at Rhodes with the idea in mind that I would move into an Engineering faculty at some university, ja. Hmm, I didn't have the marks to go straight into Engineering so I had to do the BSc with maths and other subjects to get into Engineering. But then I was struggling a lot with the extreme Science and the Maths, so I decided to switch to a BCom. - John (final follow-up).

John enrolled in a BCom at another university. However, obtaining and transferring credits from one university to the next (entry requirements) was a challenge and delayed his studies. John explained:

I immediately signed up at UNISA. Sigh... I did two subjects in my first year and hmm they just weren't accepting, or they weren't exempting my subjects from Rhodes. I couldn't continue with the 3rd-year subjects that I needed to... they've exempted it now

they just won't let me register for more subjects, so that will be my mission for next year. - John (final follow-up).

John's studies were delayed; this highlights the impact of entry requirements on students' career trajectories. For John to continue he would need funding for an additional year, therefore both accessing funds to support him to continue and meeting entry requirements are both highlighted

The excerpts above highlight systemic issues over which students have less control over that can be viewed as barriers that impact on students' career decision-making.

Job security and financial reward

This theme considers and includes the apparent impact that potential job security and financial reward have on students' career decision-making processes. The following excerpts were in response to the question: In your view and drawing from your own personal experience, what factors impact and influence students' career decision-making? For example, Li-Fen's response was as follows, illustrating her appreciation of her family's resources that have enabled her to study subjects of her choice:

Family background. For me, obviously, if my family did not have the money to support me I would have chosen a career that will bring you money faster and quicker and probably chosen more Accountancy and Science subjects but because my family have the ability to support me and to do something that I like without worrying about whether I would earn money or not: I have the chance and the fortune to pursue my studies in Classics. - Li-Fen (final follow-up).

Naomi reflects on the same question and her responses are a contrast to the above:

...with following those majors I am almost 90% guaranteed to have a job whereas with Art and Drama some people struggle you know, to make it, I think my priority was to find a job after school, Ja...Irrespective of what's going on, let me continue with my major, I am guaranteed to get a job and be fine. - Naomi (final follow-up).

She noted further:

I do want to study further, like doing my honours in Organizational Psychology but I do not have funding or a scholarship, but I do want to study further. I am currently looking for employment within the Human Resources field than I will see. - Naomi (final follow-up).

Both Li-Fen and Naomi highlight the impact of job security and financial reward as factors that impact students' career decision-making. Li-Fen is very aware of her position to select a degree of her choice without the pressure to secure a job. This is different for Naomi, where she has needed to carry on with her major subjects regardless of what is happening in her personal life, because of the pressure to secure a job and emphasis on pursuing a degree that will guarantee financial security.

Thobile further highlights the impact of financial reward and job security on her decision-making:

I would like to do my honours in Organizational Psychology to be more skilled and to further develop myself but for now I would like to teach English in China so that I can earn money and travel a bit and save up as well - Thobile (final follow-up).

The above excerpts highlight the impact of the larger macro system such as economic conditions, educational policy and job opportunities as factors that impact and influenced apparent students' career decision-making process.

This chapter has presented a thematic analysis of participants' responses to the research questions, with some links provided to research literature, where appropriate. Key findings illustrated in this chapter are that all participants found the assessment useful in various ways and described it as a valuable tool that assisted them in their career decision-making process. The career assessment process fostered a deeper self-understanding for participants; it broadened their career exploration and career knowledge; it assists to identify interests, values, competencies and career preferences. Factors that influenced and impact students' career decision-making over the course of undergraduate studies were also identified.

The next chapter is the discussion chapter, which will draw from all the findings chapters to provide further information on similarities and differences across the multiple case studies. The chapter will draw from the DCF (Vondracek et al., 1984) as a framework to further discuss the findings and answer the research questions.

Chapter 8: Discussion

This chapter links key findings from this research to established literature. To recap, the main aim of this study was to evaluate the relevance and effectiveness of a university career counselling services from the students' perspectives. The focus was on gaining an indication of the perceived effectiveness of assessment measures used and to ascertain the influences that impact the students' career decision-making over the course of undergraduate studies. This chapter aims to summarise and expand upon the findings of this study and to answer the following research questions:

- 1 What is the relevance and effectiveness of career services at a university?
- 2 What role do psychometric assessments play to assist students in their career decision-making?
- 3 What factors appear to impact career decision-making and assist students to make career-related decisions?
- 4 How do students' study trajectories unfold after their career assessment and what influencing factors become evident?

In chapters 5, 6 and 7, data were reported in relation to the above questions. In reflecting on these questions, what became evident from the findings chapters was that the answers to the research questions present a complex picture. The DCF (Vondracek et al., 1986) proved to be useful in highlighting the interconnections in answering the research questions, in particular, looking at the influencing factors and impact on students' career decision-making and how these unfold during the course of undergraduate studies. Thus, the DCF of Vondracek et al. (1986) will be used to organise and make sense of the contextual data.

Overview of findings in response to research questions

Career development theory

The case studies in Chapter 5 provide an overview of the participants' career problems, the career assessment process and a brief overview of their career trajectories. The following discussion aims to summarise and strengthen the overall picture presented by the findings chapters. The participants' career problems can be understood by looking at Williamson's (1939) four categories of career problems, as explored below:

1. No career choice

This is evident when individuals are unable to select a specific career path or have no or limited awareness of their career interests. A few participants came to the centre uncertain about their plans for the future; they had little insight into their career interests and were undecided on a particular career direction.

2. Uncertain career choice

This refers to when individuals have selected an occupation, but are hesitant regarding their choice. The majority of participants came to the career centre because they were uncertain about their selected major subjects and degree options. They thus wanted to do a career assessment to confirm if their personality and strengths were best suited for their chosen major subjects and career direction.

3. Unwise career choice

This occurs when there is a lack of agreement between the client's interests, capabilities or aptitudes and the requirements of an occupational environment. Very few participants came to the centre committed to an occupation that had already been chosen or suggested by others and accepted with limited questioning of their suitability and career interest.

4. Discrepancy between interests and aptitudes

This refers to incongruence between a client's occupational interests, aptitude, abilities and personality. A few participants were uncertain whether they had selected a suitable career path and were uncertain about their goals for the future. They found it difficult to articulate their various interests, aspects of their personality and values. One felt that he did not know himself well enough to make an informed decision, whereas others had been unable to study their intended careers because they did not meet academic entry requirements.

The findings indicated that participants' career knowledge and decision-making are impacted by a lack of adequate self-awareness and information about their career interest. The need for enhancing the career development of HE students is recognised as a core function of student counselling services and is related to critical issues such as increased access and retention of students (Botha et al., 2005). Policy documents of the SAACDHE clearly indicate that student counsellors have a multifaceted role that requires that they consider the holistic development of the tertiary student population (General Management Committee of SAACDHE, 2007). Therefore, career counselling needs to be considered as an important function of student counselling services. However, the student to counsellor ratio is a constraint

on the effective provision of career counselling services (Maree, 2009; Watson & McMahon, 2009). Career counselling includes assessment of prospective and registered students, career preparation activities such as job hunting, curriculum vitae writing, full-time and part-time employment placement and relationship-building with graduate recruitment employers (General Management Committee of SAACDHE, 2007).

A key question remains, how can career counselling be tailored and applied to make it more useful to students, especially the many students who, according to Maree (2012), receive little to no career counselling. These students are consequently either excluded from sought-after fields of study at institutions of higher learning or lose interest in their studies after having enrolled for particular fields of study. It is against this backdrop that this study aimed to evaluate the career services offered at a University career centre.

Research Question 1: What is the relevance and effectiveness of career services at a university?

A fundamental aspect of this study was to evaluate the career counselling services at a University career centre. As described in Chapter 6, the career services evaluation questionnaire that participants completed after undertaking a career assessment provided an overview of the perceived effectiveness and subjective satisfaction of the career counselling services from students' (participants') perspectives. These findings were grouped into different sections of the questionnaire, as explored in Chapter 6. These will be discussed in this next section under headings related to the different elements of the questionnaire. Similar findings are embedded in the other findings chapters (5 & 7) and will be included in the sections below.

Initial contacts

Morgan (2014) argues that adolescence and young adulthood are particularly vulnerable periods for career development since, in addition to unemployment, South African youth are confronted with various career-related concerns. These include insufficient knowledge of career opportunities (Mpofu et al., 2011), a lack of information regarding local labour markets (Sharf, 2010), uncertainty related to career interests, and limited or inaccessible career counselling and assessment at school. Moreover, the majority of students in SA are the first in their generation to enter university (Universities South Africa, 2018) and might not be familiar with the options that they have when they access HE, nor are they familiar with how things work at university (Schoeman et al., 2021). In addition, a number of first-year university students are enrolled in programmes that they may not be suited to, and may not be familiar with seeking or using counselling to assist them with their problems (Mabizela, 2014). This study found similar concerns, where pre-service the participants expressed their lack of confidence in identifying and selecting suitable majors and career directions, as initially

expressed by the majority of participants in their response to the purpose of seeking career counselling.

Results from the statistical analysis of this study suggest that the participants were satisfied with the quality of the initial contact and admission process. Participants in this study were satisfied with the communication by phone and email and their being able to get an appointment within an acceptable time. This emphasises the need to provide ready and efficient access to good ethical practices, including during the admissions processes of career services. This initial contact has the potential to provide a comprehensive institutional contact point for students, where they can find information on a range of university-related matters (De Klerk, 2021).

The interactions and process

Choosing a career and designing towards the impact upon the life trajectory is one of the most challenging decisions for any individual. Many people, including adolescents and young adults, experience difficulties that prevent them from negotiating such crossroads smoothly (Maree, 2012). Moreover, the task of choosing a career remains formally unassisted for many learners (Akhurst & Mkhize, 2006). In addition, adolescents who fit the profile of being identity-diffused often fail to engage actively in career exploration (Seabi, 2012). New careers require new skills and career counselling has to keep abreast of these developments if it is to remain relevant in the postmodern world (Maree, 2009, 2010, 2012; Savickas, 2012; Savickas & Baker, 2005; Watson & Stead, 2017).

Although considerable gains have been made in both theory and practice, cultural diversity has not been in the forefront of real-life career counselling, particularly in developing countries like South Africa (Maree 2010b, 2012). However, gaining insight into social and cultural career influences could help create culturally sensitive career counselling techniques that respect diverse adolescents and their individual needs (Albien & Naidoo, 2016).

Findings suggest that the majority of participants were satisfied with the quality of the career counselling sessions, with the majority indicating that their expectations were met and that the advice received was helpful. The career counselling process assisted with facilitating self-insight and career knowledge as expressed by some participants. It is therefore important for career practitioners to keep abreast of new career developments and to tailor career counselling to the individual needs of students.

The career assessment

The career measures that adolescents and young adults can access in South Africa are considered outdated and do not reflect the contemporary world of work (Morgan, 2014). This

has led to a call for contextually and culturally sensitive, indigenised career approaches (Naidoo et al., 2016; Stead & Watson, 2013, 2017; Watson, 2010). Practically, this implies that individuals from diverse cultural, language, and socioeconomic environments are given equal opportunity to complete or respond to any career measures (De Kock et al., 2013). Through the development of the SACII, initial steps were taken by Morgan (2014) to address these limitations (Rabie, 2017). The SACII is a constrained emic approach, developed and investigated using diverse sample groups in terms of gender, ethnicity, language, age and occupational status that reflect contemporary career opportunities that are important to the South African occupational environments (Morgan, 2014). The unique contributions including the adapting and translating of the SACII into isiXhosa and Afrikaans (Rabie, 2017), as a reliable and valid instrument in the South African context emerged as a strategy to address the socio-political and emic challenges related to career counselling in South Africa (Rabie & Naidoo, 2019). These updated and draft versions of the SACII were made available to this researcher, for use in this different context.

This study employed the SACII as part of the assessment battery in an effort to use recently developed valid and reliable career assessment measures that are contextually relevant to the South African student population. One of the aims of this study was to gain an indication of the perceived effectiveness of the psychometric tests used at the career centre. Analysis from the questionnaire indicates that the majority of the participants were satisfied with the feedback and information received from these and that they found the information obtained from their assessments as useful and relevant.

An important finding from the study is that the participants found the assessment battery to be helpful in the career guidance process, an important aspect of the career counselling process. Integrating the SACII as part of the career assessment battery further emphasises the importance of using a multicultural career counselling instrument that is useful and applicable to clients from diverse backgrounds and can be applied to the South African student population.

Career insights and options

Results from the questionnaire indicate that participants were satisfied with the career assessment and counselling process in that it broadened their knowledge about career options. This illustrates the role of career assessment and counselling, providing individuals with valuable information about the world of work, through engaging in the process of career exploration (Weisgram et al., 2010). An outcome of the career counselling approach that was used in the study was to show develop an integrated approach that better accounts for the role of social contexts that people need to consider, to advance their career stories. Using both psychometric scores and personal stories can enrich the process and outcomes of career

assessment and counselling for all people (Hartung, 2009). This suggests that the process of career counselling and career exploration cannot be separated from the social context and illustrates that career development is linked to the person's overall lived experiences.

Adopting an approach that uses contemporary perspectives to build on established models and methods, links modern and postmodern perspectives on career assessment and counselling. This augments the traditional matching model, and may result in a HE counselling system that more effectively provides career services (Hartung, 2009) to meet the needs of diverse population groups in South Africa.

Overall opinions about career service

The findings from the evaluation questionnaire suggest that the majority of participants would recommend the career services facility, that they would utilise the service again if the need arose and they regarded career counselling as a necessary service at university. Assessing individuals' career interests is central to the prediction of educational and career choices (Hansen, 2005). This also results in positive long-term outcomes in terms of HE degree completion and job satisfaction (Hirschi & Läge, 2007). Therefore, there is the need for students to utilise career assessments to acquire self-knowledge and establish a career trajectory (Morgan, 2014). Furthermore, career services should assist students to develop professionally, with career counselling being goal-orientated, and is thus important in HE.

In summary, it would appear that the majority of participants were satisfied with the quality of the career counselling and career assessment process and that the career counselling services helped participants with their career decisions. Participants made positive remarks about the assessment battery that was used in this study, highlighting the contextual relevance of career assessment and counselling, as used in this study.

Research Question 2: What role do psychometric assessments play to assist students in their career decision-making?

Chapter 5, as well as the descriptive reflective notes in Chapter 7, provides a number of themes that illustrate the value of psychometric assessments and how these assist students' career decision-making. These will be discussed in this next section.

Identifying strengths and interests

The majority of the participants reported that the career assessment assisted in identifying and affirming their strengths, interests and passion. For most, this is an important factor in the career decision-making process and when selecting degree majors, students' major subjects need to align with their strengths and interests to enable them to achieve. Findings from the

study support the assumption that career assessment inventories can help clients better understand their abilities, personality traits and interests. Counsellors can use this acquired self-knowledge with knowledge about the world of work to choose appropriate careers (De Bruin & De Bruin, 2013) and assist clients on decisions regarding their subject choices and study field (Van Eeden & De Beer, 2017).

It was interesting to note that the participants highlighted how the combination of different tests that formed part of this assessment battery assisted in identifying interests and strengths. Participants also commented on the value of having assessments interpreted by trained professionals and how the assessment report provided more insight, enabling them to express themselves better; and how they still refer to the assessment report from time to time. This emphasised a key component of the career assessment process where the practitioner obtains important information about the client's career concerns (Zunker, 2012), using this information in conjunction with details of the client's background, to guide the selection of applicable psychometric assessment instruments, to provide clients with valuable information to resolve their career indecision (Morgan, 2014). The findings also support literature that suggests that by using interest inventories, practitioners may generate the necessary information to reveal individual competencies and career preferences (Harrington & Long, 2013).

Career Guidance

Participants expressed an appreciation of the process because they felt it was more of an exploration, providing them with more information to work with, it focused on individual strengths and what they enjoy. The majority of participants made several links and connections between the guidance from their career assessment reports and their study options. Overall, the assessment provided them with clarity on what to study; as well as the way forward in their career decision-making process. These findings support literature that views counselling as facilitating self-understanding, realistic planning and decision-making skills (Chartrand, 1991).

The importance of an aptitude test as part of the career assessment battery was also emphasised. This also supports the literature that suggests the use of aptitude profiles together with other tests and academic performance can give guidance on decisions regarding subject choices and field of study after school (Van Eeden & De Beer, 2017).

It is interesting to note that participants who had done career assessments before, continue to seek career services and undertake career assessments when they need career guidance. This finding suggests previous career guidance was useful for these participants and

emphasises that careers are constructed throughout an individual's life span (Super, 1980). It is evident that the career assessment process also encouraged them to pursue a degree to which they were more suited. The importance of self-knowledge as well as occupational knowledge in the search for career directions (Zunker, 2012) was therefore emphasised in this study.

Links between personality and interest

Psychologists use personality assessments to identify the individual's unique characteristic strengths and way of interacting with the world and self. When used in conjunction with other career assessments, personality tests can help provide guidance on careers and academic subjects that would best suit individuals (De Bruin & Taylor, 2013). The majority of the participants highlighted how the assessment facilitated a better understanding of themselves and assisted in identifying their career interests.

Findings from the study also support literature on career assessment, that it serves to confirm a client's self-view and provide new possibilities on how they see themselves; and that individuals seek to make career choices that are consistent with the way in which they view themselves (De Bruin & De Bruin, 2017). Therefore, personality tests are valuable to develop deeper self- understanding and psychological growth (De Bruin & Taylor, 2013).

Values

Every person has goals that they aspire to and skills that they can offer to the working environment. In the same way, every working environment has opportunities and reinforcers to offer individuals. Work adjustment will be promoted if individuals' skills correspond to the needs of the working environment and the reinforcements of the working environment correspond to the needs of the individual (Dawis, 2002). It is likely that this reciprocal process is also relevant to immersion in studies in the different disciplines.

The career assessment process encouraged participants to think more broadly about the links between career choices and other elements in their lives. They reflected on their values in relation to the career exploration process, highlighting both personal and work values. Some participants reported a shift from valuing only occupations that can provide them with monetary benefits to choosing an occupation that would provide them with personal fulfilment. These findings emphasise the importance of value clarification within the career assessment process (Zunker, 2006).

Clarity and confirmation

Participants reported that the career assessment provided clarity and confirmation of what they were interested in and what they would like to study. It is also important to note that this information must be given meaning within the broader system of influences and life themes of clients. These findings correlate with literature that supports the process to enhance self-awareness (De Bruin & De Bruin, 2013).

In summary, all participants found the assessment useful in various ways and described it as a valuable tool that assisted them in their career decision-making process and degree choice. The career assessment process fostered a deeper self-understanding for participants, it broadened their career exploration and career knowledge, and assisted them to identify their interests, values, competencies and career preferences.

Research Question 3: What factors appear to impact career decision-making and assist students to make career-related decisions?

The thematic analysis findings of the follow-up interviews presented in Chapter 7 are discussed below. As stated earlier, the DCF of Vondracek et al. (1986) is useful as a tool to understand the development of an individual's career perceptions in a changing environment and will be used to organise the data and make sense of the contextual influences.

Microsystem

Family of origin

Family influences had a noteworthy impact on the career decision-making of participants. Vondracek et al. (1986) suggest that: "The family context is a complex web of several powerful forces that influence the career development of children" (p. 49). Parents play an important role in the child's occupational socialisation process. The section below will discuss key findings from the study that impacted and influenced participants' career decision-making that emerged from the family of origin.

The majority of participants reported role models, friends, and family members as cogent factors that impacted and assisted their career decision-making process. Participants perceived parental figures and family members' occupations as influencing factors. Being exposed to friends and family members' occupations through informational interviewing and job shadowing influenced participants' career interests. Some participants reported that selecting a particular institution, faculty, and study direction were influenced by their older siblings' decisions, with many following in their siblings' footsteps. The findings highlighted how individuals' frames of reference impacted career decision-making and how individuals look up to family members as role models for possible careers to consider.

Participants also reported that their career decisions were influenced by what their parents wanted them to study, where they felt pressured to follow through on their parents' preferred career interests for them, often due to the financial support provided by their parents. In addition, some participants reported positively on the support they received from family and friends and how this support played a valuable role in helping them with their career decision-making. These findings support literature concerning family influences on career development, emphasising parental support, financial or emotional, as well as sibling roles and relationship influences that impact an individuals' career interests and career-decisions making (Albein & Naidoo, 2018; Roe, 1956; Vondracek et al., 1986).

Child's extra-familial network

School: Early career guidance

Exposure to early career guidance was highlighted as an important factor that assisted some participants with their career decision-making process. Participants traced their exposure to early career guidance as far back as primary school as well as high school. Vondracek et al. (1986) see the school context as the next most important microsystem after the family because it strongly influences career development. Some participants highlighted the value of early career guidance they received from their school teachers and how this assisted in their career decision-making process. These findings seem to support literature on the importance of interpersonal relationships with teachers, other students, and guidance counsellors, the various roles and role expectations of the school context, and how these impact the development of self-efficacy and confidence (Vondracek et al., 1986).

Early career guidance provided opportunities for self-reflection, realistically looking at career options and motivated participants to work towards their goals. Early career guidance in this study also has relevance to the career guidance prospective students and first-year students receive at university before they make a final decision on what to study. Participants highlight that receiving career guidance before applying and registering for a degree assisted with their career decision-making process. Moreover, career guidance helped participants to make satisfying career choices, adjust to those choices (Hartung, 2009) and assist in their career decision-making process. The findings also highlight how the various transitions in the school system serve as practice for future transitions, such as from school to work (Vondracek et al., 1986). The findings thus highlight the impact of early career guidance and school more broadly as a salient microsystem influence on students' career decision-making processes.

Open Days and Orientation week

Five participants highlighted important events that provided additional guidance and assistance in the career decision-making process, indicating orientation week (O-week) and university open days. The information obtained during orientation for academic purposes as well as involvement in extracurricular activities provided students with a wide variety of options to choose from and provided an opportunity to identify what they liked and what they were interested in. Therefore, O-week provided an opportunity for participants to be integrated into the institution and find information on a range of university-related matters to enable them to successfully navigate academic and non-academic spaces within the institution (De Klerk, 2021) that assisted and influenced participants' career decision-making process.

Information gained from personal research

The majority of participants emphasised the importance of doing research early, before university and how this assisted them in their career decision-making process. Doing research and reading up on their major subjects and obtaining more information about their interest subjects and degrees, provided guidance on their career trajectories and assisted them in their career decision-making process.

Subject preferences

Findings from the study also highlighted the importance of subject preferences and the impact thereof on participants' decision-making when selecting a particular degree and major subjects (Jäckel-Visser et al., 2021; Naidoo et al., 2019; Rabie et al., 2021). Interesting findings were that some students tended to change their subjects as they obtained more information on a particular course, and where some were still uncertain and would prefer to keep their options open. The majority of participants selected major subjects based on interest, natural talent, subjects that they enjoyed, as well as subjects that they perceived as being easy. A few participants reported developing further interest in their major subjects and that they would continue to further their studies in their selected major subjects. These findings support the LSVD postulation that "the links between career interests, goals, and eventual occupational choices are strong because people tend to choose options that they prefer" (Vondracek et al., 2014, p.100).

Adult extra-familial networks

Work: Prior Experience and exposure

The impact of prior work experience and exposure were highlighted by certain participants as important factors that assisted their career decision-making process. Some participants also noted how prior work exposure assisted them to develop personal skills and interact with

different kinds of people. These experiences included exposure to family businesses, therefore illustrating that the foundations for career pathways are often laid in childhood experiences (Vondracek et al., 2014).

Interpersonal relationships

Findings also illustrated how participating in different societies, clubs and sports, influenced and assisted in the career decision-making process. Entry into university and experiences at university were marked by greater integration with different ethnic groups and cultures, providing students with opportunities for richer interpersonal interactions (Case, 2018). These findings therefore support the ideas that career pathways are not a single choice or decision but a process that creates unfolding patterns over time and contexts (Vondracek et al., 2014).

Adult Family of procreation

Interest and passion

The majority of participants reported that following their interests and passion influenced their career decisions over the course of undergraduate studies. It is interesting to note how participants' interests developed over time, and how a broader self-understanding facilitated the career exploration process by narrowing down career directions to consider and identifying new passions. Additionally, discontinuing studies and taking up part-time work provided time for self-reflection and solidified career interests and passions for some participants. Therefore, the findings appear to support the view that “potential goals are often the consequences of the dynamic pattern of preferences, competencies, and personal agency... and the context, occurring as a consequence of ongoing experience over time” (Vondracek et al., 2014, p. 100).

None of the participants had settled into a family of procreation, and none had offspring. This is in contrast to some students who are already parents or become parents at institutions of HE, where this may impact negatively on educational progress and future career prospects (Mbelle et al., 2018).

Macrosystem

Economic conditions: Access barriers

Obtaining funding and meeting entry requirements were highlighted as factors that impact and influence students' career decision-making process. The importance and benefit of obtaining funding and how this assists and impacts furthering students' career trajectories were emphasised by the findings of this study. In contrast, receiving late funding towards studies

has a negative effect and results in entering university later than the start of the academic year. More importantly, not obtaining funding for studies resulted in the discontinuation of these due to lack of finances and had a negative impact on participants' career trajectories.

Educational policy

Not meeting entry requirements had a marked impact on some participants' career decision-making process. Certain participants had to enroll in a different degree due to not meeting the entry requirements of their desired degree choice, or discontinue earlier studies due to not obtaining funding. Obtaining and transferring credits from one university to the next also posed challenges and caused a delay for a few. Therefore, systemic issues, namely funding, entry requirements and recognition of credits by HE institutions, over which students have limited control, are factors that impact students' career decision-making.

Job Opportunities: Job security and financial reward

The findings highlight the impact of job security and financial reward as factors that impact students' career decision-making. Some participants were very aware of their privilege to select a degree of their choice, without the pressure of this being attached to a job. This was different for others, who needed to carry on with their selected major subjects regardless of what was happening, due to the pressure of pursuing a degree that would guarantee financial security and to mitigate against being unemployed as a graduate.

In summary, findings from this study support literature on the developmental-contextualist perspective and emphasise ongoing change both in the individual and in the environment, and the dual nature of influences between the individual and the environment (as in Albein & Naidoo, 2018). These occur over the course of the life span, further impacting upon the development of an individual's career and career decision-making (Stead & Watson, 2006; Vondracek et al., 1986).

Research Question 4: How do students' study trajectories unfold after their career assessment and what influencing factors become evident?

The greatest career change seemed to take place after the career assessment. This was reflected in the findings of the evaluation questionnaire in Chapter 6, the follow-up interviews narratives findings in Chapter 7 as well as the participants' career trajectory and reflections in Chapter 5. The participants' career changes can be understood from Williamson's (1939) counselling procedures; he viewed counselling as facilitating self-understanding, realistic planning and decision-making skills (Chartrand, 1991; Watson & Stead, 2013). In addition, the DCF of career development points to the connections between the participants and their constantly changing environments (Vondracek et al., 1986), also emphasised by the LSVDs understanding of vocational behaviour and development across the life-span (Vondracek et al., 2014).

The discussion below follows the 18-month follow-up, which took place during the participants' final years of studies. The career assessment, career counselling and developmental-contextual factors were found to be useful in facilitating career exploration as discussed in what follows.

Enhanced self-knowledge and career development

The career assessment proved to be useful in providing a point of reflection for those participants who lacked career knowledge and self-insight, it broadened and provided rich insight into understanding their career interests, values and personality. The assessment proved to be useful in facilitating and assisting participants to select majors that are more aligned with their career interests. Participants indicated that specific personality traits are aligned to a specific career, individuals need to have a specific personality trait to work in a certain career field. Holland (1997) argued that there is a link between personality and occupation. The participants also emphasised that individuals need to do the necessary personal introspection and career research to be able to learn more about who they are to assist them in their career decision-making process.

The career assessment provided a sense of perspective for participants in terms of what major subjects to pursue and assist with more refined career goals that assisted participants towards fulfilling their passions and career interests.

Taking a gap year is often seen to be preserved for those from a wealthy family context. Here the gap year was recontextualised (Case et al., 2018), where participants whose plans had not worked out obtained valuable experience from taking a gap year, enhancing self-awareness and assisting in career decision-making and constructing a way forward.

Career services improved career planning

Careers are constructed throughout an individual's life span as argued by Super (1980), which is why it is important to provide career services when the need arises to help individuals construct their careers appropriately. The findings indicated that participants' career knowledge and career decision-making proved to facilitate and improved their career planning.

Li-Fen would like to continue her studies at a University in China, to study Chinese Philology and broaden her knowledge of the Chinese language. She is bilingual and is interested in translating. She further reported that the career assessment definitely assisted in directing her towards a general occupational direction and that the careers listed in the assessment report assisted her to identify what she was interested in and what she was better suited to.

Llewellyn reported that he is interested in mapping and space development, and would like to do his honours specializing in Geographic Information Systems (GIS) to further develop his interest in Information Systems and mapping. He would also like to teach English abroad prior to doing his honours degree.

Tamia pursued joint honours in HKE and Mathematics; and Tobias reported that he was still interested in Information Systems, but more on the management and business side of the field. He would like to pursue his honours in Information Systems in a BCom degree.

Thobile enrolled in a diploma in Enterprise Management. This was aimed at her interest in starting up her own business. She was also looking into teaching English in China and had identified a school of interest.

Contextual influences on career development

Developmental contextual factors as illustrated by the participants and the various interrelated contexts had an influence on their career decision-making and impacted their career development. Socio-economic factors such as funding and HE requirements (i.e., meeting entry requirements, and recognition of credits) impacted participants' career development: these findings are evident in the participants' career trajectories.

Economic conditions

Naomi would have liked to pursue her honours in Organizational Psychology but did not have the funds to do so. She thus applied for employment in the Human Resources field. In contrast, Faith obtained a scholarship to pursue both her interests in Law and Business overseas.

When exploring the career aspirations of participants, common findings were the options of teaching English overseas or entering an entrepreneurial occupation. Teaching English after university is seen to be a useful way to start a career and gain work experience, even if one does not continue in the education field. Economic conditions may be strained and unemployment high, yet the demand for English teachers internationally remains (Griffith, 2017). This consideration might also be in response to South Africa's challenging socio-economic climate that is characterised by low economic growth rates, high levels of poverty and unemployment, particularly amongst South Africa's youth, where entrepreneurship is often seen as the solution to such problems (Hughes & Schachtebeck, 2017).

Job opportunities and Educational Policy

John did not meet the requirements to pursue Engineering; he continued to work in his family business and later enrolled in Business Studies at a different university after obtaining more

clarity in terms of his career interest. Some students take longer to work out what their real interests and strengths are and these detours may come at a considerable cost (of time and money). There is often a lack of good advice, and different institutions and disciplines allow for greater or lesser flexibility to change study courses (Case et al., 2018). John refers to this and shares his experiences and frustration with the rigidities in terms of credit transfers within universities and how this has delayed his career trajectory.

Organizational/Institutional context

Busi applied to a university and was accepted, but could not obtain funding. She was working at a retail store at the time of the study, and still determined to complete her studies, and had applied for bursaries. She still refers to the assessment report from time to time and reflects that some things (like work values) have changed. Time at university is not without value for those students who have not yet completed, or may not complete. What they take from it is complex and varies, often expanding the way they see the world and the ways they view their roles within it. In many instances, it changes how they see themselves (Case et al., 2018). Even though she has not yet completed a degree, Busi feels that she is a changed person, and is optimistic about her capacity to overcome her challenges to pursue her studies.

In addition, Kayla reported that her motivation and interest to upgrade her marks to enrol in the medical field was reinforced by her support of family and the guest speakers who were medical practitioners, and who were also previously enrolled in the upgrading programme. The proposal by the Council on HE (2013) to increase the length of a basic undergraduate degree by one year (Case et al., 2018) seemed to be an effective contributor toward students' success: for example, Kayla spoke positively about the support she received through the extended curriculum programme and making the adjustment to university studies through the upgrading programme.

Environmental conditions

Environmental conditions impacted participants' career trajectories. Chrystal discontinued her studies due to health reasons. COVID-19 opened up an opportunity for her to teach online and this further affirmed her interest in teaching. She registered for a teaching degree at a university closer to home and reported that she had always wanted to go into teaching. Many students do not have a good idea at the start of the University of what their strengths and interests are, and for many this needs to be discovered through trial and error (Case et al., 2018). Choices made initially about what to study and where to study seemed to impact Chrystal's career trajectory. However, exposure through work experience and the impact of environmental conditions assist her with her career decision-making process, illustrating the

multiple benefits of part-time work connected to the University and how this often provides additional opportunities for personal growth and academic confidence (Case et al., 2018).

In summary, the career assessment and counselling used in this study as well as the contextual influences on career development across the life-span, as emphasised by the DCF and LSVD, highlight and better explain participants' career interests, the contextual factors that impact on and influence students' career decision-making process, throughout their undergraduate studies.

To summarise, this chapter has attempted to answer the research questions by identifying and discussing key findings that have emerged in this study. It has also considered relevant aspects of established literature, in relation to the findings as described.

The following chapter, which is the final chapter of this thesis, will include an evaluation of this research through reflection on its strengths and limitations. In addition, recommendations for future research as well as recommendations for practice will be made. This final chapter will also include my concluding reflective thoughts, as a practitioner who was involved in providing career counselling to students.

Chapter 9: Conclusion

This chapter aims to provide concluding thoughts and an evaluation of the study, by reflecting on its strengths and weaknesses. Further to this, recommendations for further research will be made. This chapter will also draw on some of the key findings and make recommendations for practice. The chapter ends off with my final thoughts as a researcher.

Strengths of this study

A pragmatic approach to inquiry is a noteworthy strength of this study. It situated the researcher in a natural setting, where the researcher who is grounded in this study (as a psychologist providing career services at the centre), aimed to interrogate and evaluate the career counselling services at a university career centre. Thus, it contributes to practical knowledge that can be used for making a purposeful difference in practice (Goldkuhl, 2012), and contributing to the paucity of literature on longitudinal studies about the career development of young adults in the SA context.

Pragmatism embraces a plurality of methods and allows for different worldviews, different forms of data collection and analysis, in order to best respond to the research questions (Tashakkori & Teddlie, 2010). A strength of this study is that it used an explanatory sequential mixed-methods approach that provided an in-depth perspective on the perceived effectiveness of psychometric assessments, used at a university career centre; and evaluated the relevance and perceived effectiveness of the services from the students' perspectives. Therefore, it could be of value to the users of the services and to guide practitioners who render the services, to tailor career services that would be meaningful to students in HE. This study also provides some recommendations (elsewhere in this chapter) for the possible improvement of services.

The multiple case study design (Schoch, 2020; Yin, 2018) provided an opportunity to gain an in-depth understanding of participants' career interests, and the case studies shed light on factors that impact and influence students' career decision-making processes. Case studies examine the influence of contextual factors, in ways that are not possible when large numbers of participants are being studied (McLeod & Elliott, 2011). A more contextualised approach to understanding and informing career development theory and career counselling within SA continues to be advocated for (e.g., Maree, 2013; Stead 1996). Considering this, this study used a contextual approach (the DCF, Vondracek et al., 1986; and the LSVD of Vondracek et al., 2014), which are considered to be appropriate to career development in a diverse context such as SA.

An important strength is the use of a combined quantitative-qualitative approach to career counselling and assessment, which is concurrent with practice recommendations as found in

the literature (Cook & Maree, 2016; Maree, 2011; 2013; Reese & Miller, 2006; 2010). Using a combined approach facilitates an understanding of the participants in a way that would not have been possible using a quantitative approach only. Had I given the participants a battery of psychometric tests only, I would have missed gaining an holistic view of the participants and their contextual factors that impact on and influenced their career decision-making processes. Furthermore, the advantages of the one-on-one follow-up sessions further enhanced the above and facilitate a longitudinal approach where the researcher followed-up on students' career trajectories and provided follow-up career counselling, which is advised in the literature (De Bruin, 2011; De Klerk, 2021; Van Schoor, 2012).

A unique contribution of this study was to address the emic challenges related to career counselling and assessment in SA. Thus, the study employed the use of the SACII, an emic test as part of the assessment battery of this study. The findings of the present study provide modest further support for the utility of Holland's RIASEC typology in SA (Morgan et al., 2014), adding to confirmatory evidence that the SACII may be useful as a valid career interest inventory, within the diverse South African context (Rabie, 2017).

Limitations of this study

Even though the findings appear to be generally favourable in relation to the services offered, there are always opportunities for improvement; and on reflection during the implementation and write-up of the study, several limitations of the study were identified. Firstly, as researcher my role in the study was multi-faceted and very complex due to my position as an employee, manager and psychologist of the career centre at the start of this project. This relationship had positives for the research in that the researcher is knowledgeable about the content and context of this study, and that participants could potentially benefit from this, by having continued career counselling services throughout their undergraduate studies. This includes the value of the continued therapeutic alliance with the participants, which could also be seen as a positive contributor (De Bruin, 2011; De Klerk, 2021; Van Schoor, 2012). The negative was that because I was an employee at RUCC, participants could potentially be less critical in their reflections and there are concerns about the potential to bias the study. "Researchers are an integral part of the process and final product, and separation from this is neither possible nor desirable. The concern instead should be whether the researcher has been transparent and reflexive" (Galdas, 2017, p.2). In Chapter 4 of this thesis, I reflect on the details of the ways I carefully navigated my insider/outsider status (Akhurst et al., 2018).

Although every effort was made to recruit a representative sample group, a second limitation was that a small sample was used for this study; a total of 15 participants at the time of

undertaking data collection. This means that the findings have restricted generalisability, in that it is difficult to generalise the findings to the broader population. However, as this research evolved from the initial design of a predominantly large quantitative study to a multiple case study design, it became more reflective in nature, and contributed to a deeper understanding of the different contextual and life- and study-related perspectives that influenced and impacted students' career decision-making process.

Another potential limitation is in relation to the potentially sub-optimal suitability of the evaluation questionnaire used in this study, since the original questionnaire was validated in a very different context, although for a similar purpose. This led to it being of limited value in illustrating which psychometric assessments were most useful for the participants. Sufficient care and attention should therefore be taken at the design stage of a study to ensure an adequate structure, to carry out the study (Curran et al., 1998).

A final limitation is that I did not construct this study to be comparative and used a once-off evaluation questionnaire. However, were there to be a more of a comparative study with a larger sample size, differences between participants' career trajectories and evaluation of the services might have yielded further interesting data that would have deepened my insights and could have further improved the credibility of the findings.

Recommendation for future research

The findings of this research study indicate that the utilisation of the Vondracek et al. (1986) DCF of career development and the LSVD of Vondracek et al. (2014) provided a background to understanding the rich contextual influences of career development across the life-span; and these appear to be valuable models in facilitating career exploration. It is therefore recommended that future research utilising the frameworks should be carried out. This may contribute towards the development of psychological theories in the local context (Naidoo & Kagee, 2009), and could contribute to the development of career assessment and counselling tools that are both sensitive to and relevant to our diverse population (Laher & Cockcroft, 2014; Morgan et al., 2014; Rabie, 2017; Roberson, 2018).

The inclusion of the SACII in the assessment battery proved to be useful in aiding participants with their career decision-making process. Therefore, I concur with Rabie (2017) that further research needs to be done into devising indigenous assessment instruments and techniques that are designed for the specific population groups and languages used.

Considering the strengths and limitations highlighted in the above sub-section, a bigger sample size and more comparative studies, with pre-service and post-service evaluations, would yield further interesting data.

It would appear that obtaining further data on the career trajectories of participants might be improved by increasing the proximity of the follow-up sessions, perhaps to every six months. During the journey of students through HE, it is important to identify the influences on student success that could aid in possibilities of access to better lives, but also to recognising the collective contribution that HE makes to the betterment of society (Case et al., 2018). A further longitudinal study tracking individuals up to when they qualify and perhaps a few years into their work experiences would shed further important light on career trajectories. Longitudinal research could provide data as to when most people decide on their careers, what influences are important, and how people pursue their decisions successfully.

Students need to be sensitised and informed about entry requirements and knowledge related to work, especially newcomers to the university and more particularly those from disadvantaged academic backgrounds.

Groups provide a powerful tool for a more collaborative learning experiences and aid in students career development (Phala, 2019; Roberson, 2018; Spencer, 2002). Future research could employ more group approaches, as both more cost-effective and responsive to the importance of peers in young people's lives (Rabie et al., 2021).

Implications for practice

In an ethnically and culturally diverse country such as SA, moving away from decontextualized and overemphasised individualistic approaches to career counselling and incorporating a more holistic contextualised approach to understanding and informing career assessment and counselling is recommended (Albien & Naidoo, 2018).

Then, career assessment and counselling should be explored collaboratively with clients. Combining psychometric assessment and narrative career counselling or using both a quantitative and qualitative approach, would enable practitioners to best capture their clients' career interests and assist them with their career problems and decision-making.

The results of the present study appear to provide promising support for the continued use of Holland's (1997) model in career counselling and assessment practices, when valid interest inventories, such as the SACII, are employed. If available, the utilisation of a locally developed instrument (e.g., the SACII) is preferable. It is argued that this will allow for improved efficacy in career assessment and counselling practice, providing greater validity in the assessment of career interests and relevant career information related to work that reflects the local context (Rabie, 2017).

Career-related decision-making begins very early, as is evident from the research findings, and receiving career counselling in school has implications for the successful completion of and obtaining good matric results: these are inextricably linked to further education and training opportunities.

It is therefore recommended that career counselling be provided much more actively in schools. An important career development period for learners in SA is in Grade 9, where learners are required to select their school subjects for the remainder of their school careers. These decisions play an integral role in their ability to decide on a future study and career path (Naidoo et al., 2019). Thus, providing earlier career guidance would enable career practitioners to potentially aid in the prediction of future scholastic and employment success.

On a practical level, since not all career counselling is facilitated and conducted by a Counselling Psychologist, it is recommended that the availability and training of career practitioners be centralised and accredited by authority bodies.

Furthermore, career counselling is not a one-off practice or service. From the findings of this study, it would appear that providing ongoing career counselling in the form of individual or group sessions would be beneficial.

Researcher's personal note

A number of important contributions are made by the present study, both to the field of career counselling and career assessment in SA HE context. This study offers a different view of career development in the SA HE context and provides a comprehensive and practical approach to evaluating career services in HE. The pragmatic approach of this study where the researcher provided follow-up career counselling sessions to students throughout their undergraduate studies meant moving beyond reflection and reporting on the findings, but also taking collaborative action to assist participants with their career problems.

The longitudinal approach of this study, following the career trajectories of students from their first year and of learners entering university up until a point where most had completed their undergraduate studies, allowed for a deeper level of understanding of the broader and multiple influences that impact students' career decision making process. These were then reflected upon using the DCF (Vondracek et al., 1986) as an organising framework.

There are limited studies in SA that use the DCF (Vondracek et al., 1986) and none could be found that use the LSVD (Vondracek et al., 2014) approaches to career development. Using both frameworks proved to be useful in exploring the career trajectories of participants. As guiding frameworks for this study, they helped me to gain a greater understanding of the influences, issues and many pressures that impact on students in HE. As a result, I believe that a well-rounded picture emerged from the study. The study revealed the relevance of career assessment and counselling in HE, emphasising the importance of providing career counselling services to students to assist in their career decision-making processes. The study illustrated how the university career centre could provide career counselling and assessment

that is useful to the diverse student population and to tailor services that are inclusive of the contexts of students in SA HE.

The value of collaborating with local test developers to include the SACII in this research contributed towards the value of the career assessment battery used in this study. It proved to be useful in assisting participants with their career decision-making processes and added in a modest way to the evidence base in relation to locally developed assessments. There is confirmatory evidence that the English, Afrikaans and the isiXhosa versions of the SACII may be used as a valid career interest inventory, within the diverse South African context (Rabie, 2017).

A further collaboration with a researcher at University of Lausanne, Switzerland, aided in the distinctive design of the evaluation questionnaire that was used in this study. Adapting the questionnaire for our use and tailoring it specifically for career counselling, draws from best, evidence-based practice, and adds to the literature, providing a questionnaire that could be further used for a comparative evaluation of career services in SA HE.

The simultaneous role as an insider and an outsider challenged me to remain as open as possible and to use my integrity in reporting the findings as accurately as possible. Another researcher might have produced different results from these. Perhaps it would have been valuable to have a much more collaborative team approach to reflections and data analysis, which would have deepened my insights and could have further improved the credibility of the findings. However, I believe that the context that has been revealed sheds valuable light on the participants' career trajectories and the multiple factors that influence and impact on students' career-decision making processes; and provides useful information on the issues that students are having to negotiate as they enter HE and the world of work.

Overall, the process of conducting the research and working with the student population of young adults with whom I strongly resonate, offered an invaluable experience. Although I have been a psychologist for more than ten years and have worked in the field of career assessment and counselling for many years, I gained professional insights about working in the field of career development and have a broader understanding of the diverse and contextual influences that impact on students' career decision-making processes. Doing this research has reinforced for me the valuable role of psychology as having something relevant to offer to the career development needs of students and how career counselling might contribute towards student success.

Conclusion

This study has attempted to demonstrate the relevance of career counselling in HE. In doing so, it has provided valuable insights into the complexity and multiple factors that may

influence and impact on students' career decision-making processes. It proposes the utility of exploring career development from an overarching framework that is more relevant to the SA context; because this appears to promote a deeper understanding of contextual influences on career development across the life-span that is emphasised by the DCF (Vondracek et al., 1986) and LSVD (Vondracek et al., 2014). It is also hoped that this research has succeeded in providing the participating students with a useful space that assisted in their career decision-making processes. To conclude, I believe that this study has demonstrated the value of using locally developed assessment measures in career counselling and has potential to further inform career assessment and counselling practices in HE.

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Appendices

Appendix 1: Ethical Clearance Letter



RHODES UNIVERSITY
Where leaders learn

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T: +27 (0) 46 603 8500
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E: psychology@ru.ac.za

RESEARCH PROJECTS AND ETHICS REVIEW COMMITTEE

05 April 2017

Christine Lewis
Department of Psychology
RHODES UNIVERSITY
6140

Dear Christine

ETHICAL CLEARANCE OF PROJECT PSY2017/10

This letter confirms your research proposal with tracking number PSY2017/10 and title, 'The relevance of career counselling in Higher Education: A follow-up study at a South African university', served at the Research Projects and Ethics Review Committee (RPERC) of the Psychology Department of Rhodes University on 15/02/2017. The project has been given ethics clearance.

Please ensure that the RPERC is notified should any substantive change(s) be made, for whatever reason, during the research process. This includes changes in investigators.

Yours sincerely

Mr. Werner Bohmke
CHAIRPERSON: RPERC

Appendix 2: Extension of Ethical approval



Human Ethics Sub-Committee
Rhodes University Ethical Standards Committee PO
 Box 94, Makhanda, 6149 South Africa
 Email: ethics-committee@ru.ac.za

www.ru.ac.za/research/research/ethics
 NHREC Registration No. REC-241114-045

1st March 2021

Ms. Christine Lewis Student
 Counselling Centre Rhodes
 University

Dear Ms. Lewis

Re: "The relevance of career counselling in Higher Education: A follow up study at a South African university" (PSY2017/10)

Thank you for your application to continue the research commenced in 2017. It is noted that there are no changes in terms of the methodology to be applied.

Approval has been granted for 1 year. An annual progress report will be required in order to renew the approval for an additional period. You will receive an email notifying when the annual report is due.

Please ensure that the Ethical Standards Committee is notified should any substantive change(s) be made, for whatever reason, during the research process. This includes changes in investigators. Please also ensure that a brief report is submitted to the Ethics Committee on completion of the research. The purpose of this report is to indicate whether the research was conducted successfully, if any aspects could not be completed, or if any problems arose that the Ethical Standards Committee should be aware of.

Sincerely,

Prof Arthur Webb
Chair: Human Ethics sub-committee, RUSEC-HE

Appendix 3: Research Agreement

Research Agreement

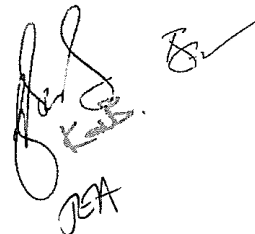
This agreement specifies the research agreement between Prof J Alhurst and Ms C Lewis (the researchers), and Dr B Morgan, Prof G.P. de Bruin, and Dr K de Bruin (the authors), for use of the South African Career Interest Inventory (SACII) for research purposes.

The authors (Morgan, de Bruin, & de Bruin) will provide the researchers (Alhurst & Lewis) with:

- The SACII questionnaire and biographic information sheet
- The SACII scoring key
- Norm scores as required

The following conditions apply:

- The researchers may use the SACII for research purposes only and only for the specified study. The SACII may not be used at the Rhodes University Career Centre for any other purpose without permission from the authors.
- The researchers may use the SACII for the specified research study at no charge from the authors, unless otherwise stipulated by the authors.
- The researchers will ensure that all administrations of the SACII are done according to the rules and regulations of the Health Professions Council of South Africa, including obtaining consent for the data to be used for research purposes. Participants must be informed that the SACII is a test under development and all results must be interpreted accordingly.
- Please include the provided biographic questionnaire as part of the SACII administration. The researchers may include other biographical information if necessary.
- The data that are collected must be provided to the authors. This data will be used for norming purposes and/or for further development of the SACII. The authors will seek



Handwritten signatures of the researchers and authors, including initials like 'JEA' and 'KAB'.

permission from the researchers before using the data for norming and research purposes.

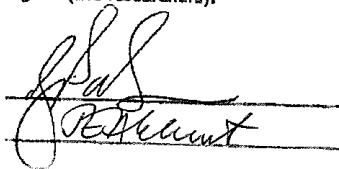
- The researchers may not make the scoring key available to any third party without permission from the authors.
- The research does not entitle the researchers to ownership of the SACII.

Signed (the authors):



Date:

Signed (the researchers):



Date:

Appendix 4: Information to participants



PSYCHOLOGY

DEPARTMENT INFORMATION

LETTER TO PARTICIPANTS

● Tel: (046) 603 7417 ● Fax: (046) 603 7614 ●
Email: [tbc](mailto:tbc@rhodes.ac.za)

THE RELEVANCE OF CAREER COUNSELLING IN HIGHER EDUCATION: A FOLLOW-UP STUDY AT A SOUTH AFRICAN UNIVERSITY

I am a PhD student and would like to conduct research in fulfilment of the requirements of a doctoral degree in Psychology at Rhodes University, supervised by Professor Jacqueline Akhurst. I am conducting a research project that aims to evaluate the relevance and perceived effectiveness of a university career counselling services from student's perspective. It focuses on gaining an indication of the perceived effectiveness of tests used, and to ascertain the perceived influences that impact on individual career decision-making over the course of undergraduate studies. Please note that ethical clearance for this research project was obtained from Rhodes University Psychology Department Ethics Committee (RPERC) on (15/02/2017), providing permission to conduct the research. All first year undergraduate students who have undergone career assessments at the career centre are invited to take part in this research project.

I will need you to participate in three distinct phases that will stretch over a 3 year period. In the first phase, you will complete a short evaluation questionnaire. The second phase will follow after a 6 month period where you will complete a post-questionnaire and will be

interviewed in order to collect your attitudes and opinions about the career services you've received as well as your career explorations. The third and final phase will follow after 18 months where you will be interviewed to explore any changes in your career-related thinking and activities. All interviews will be one hour long and will be audio recorded to help the researcher with accurate transcription. I hope this study will also be of benefit to you, to enable you to better understand your career choices and decisions.

This research project requires that volunteers are over the age of eighteen. Your involvement in this study is voluntary. This means that you are free to withdraw at any time and there will be no penalty for doing so. Please note that the provision of services by the career centre will not be influenced by participation or non-participation in the project. All the information you give/discuss will be **kept confidential** and used for the research purpose of this study only. The information will be presented in a written report, in which your identity will not be revealed. You may be sent a summary of the final report on request.

If you are willing to participate, please complete the tear-off slip below, and return it to the presenter. If you have any questions about the research project or require further information you may contact the researcher(s):

Christine Lewis
Student Researcher
Tel: 046 603 7070
christine.lewis@ru.ac.za

Professor Jacqui Akhurst
Project Supervisor
Tel: 046 603 7084
j.akhurst@ru.ac.za

Thank you for taking the time to read this study information sheet and agreeing to take part in the study.

I _____ (PRINTED NAME) would like to participate in the career counselling research as described above. I understand the contents of this information letter and participating voluntarily.

SIGNATURE: _____

DATE: _____

Please tick here if you would like to receive a summary of the completed project report

☐

Email address for report: _____

Appendix 5: Informed consent form

RHODES UNIVERSITY
DEPARTMENT OF PSYCHOLOGY
AGREEMENT BETWEEN STUDENT RESEARCHER AND RESEARCH
PARTICIPANT

I (participant's name) _____ agree to participate in the research project of Christine Lewis on the topic *The relevance of career counselling in higher education: A follow-up study at a South Africa university*

I understand that:

1. The researcher is a student conducting the research as part of the requirements for a PhD degree at Rhodes University. The researcher may be contacted on 046 603 7070 or christine.lewis@ru.ac.za. The research project has been approved by the relevant ethics committee(s), and is under the supervision of Prof Jacqueline Akhurst in the Psychology Department at Rhodes University, who may be contacted on 046 603 7084 or j.akhurst@ru.ac.za
2. The researcher is interested in evaluating the relevance and perceived effectiveness of a university career counselling services from the student's perspective. It focuses on gaining an indication of the perceived effectiveness of tests used, and to ascertain the perceived influences that impact on individual career decision-making over the course of undergraduate studies.
3. My participation in the study involves 3 distinct phases. I am required to complete two questionnaires and to undertake two individual interviews.
4. I am invited to voice to the researcher any concerns I have about my participation in the study, or consequences I may experience as a result of my participation, and to have these addressed to my satisfaction. The RU counselling centre may be contacted for further support on 046 6037070.
5. I am free to withdraw from the study at any time – however I commit myself to full participation unless some unusual circumstances occur, or I have concerns about my participation that I did not originally anticipate.
6. The report on the project may contain information about my personal experiences, attitudes and behaviours, but that the report will be designed in such a way that it will not be possible to be identified by readers.

Signed on (Date):

Participant: _____ Researcher: _____

Appendix 6: Satisfaction With the Intervention questionnaire translation

Evaluation translation from French to English.

Évaluation de la consultation - Les questions ci-dessous portent sur votre satisfaction personnelle au sujet des prestations du Service de Consultation de l'Université de Lausanne. Veuillez s'il vous plaît répondre de manière spontanée et sincère. Merci de répondre à toutes les questions.

Consultation evaluation. The questions below relate to your personal satisfaction with the services offered by the Consulting Division of the University of Lausanne. Please answer the questions spontaneously and honestly. Kindly answer all the questions.

-
1. Le délai d'attente avant le premier entretien vous a paru...

The waiting period before the first interview seemed to you to be...

☐
Très long

☐
Long

☐
Moyen

☐
Court

☐
Très court
*Very long; long;
average; short;
very short*

-
2. L'accueil téléphonique vous a laissé une impression...

The telephonic welcome left you with an impression that was...

☐
Très défavorable

☐
Défavorable

☐
Neutre

☐
Favorable

☐
Très favorable
*Very unfavourable;
unfavourable;
neutral; favorable;
very favorable*

-
3. L'accueil à la réception vous a laissé une impression...

The welcome at reception left you with an impression that was...

☐
Très défavorable

☐
Défavorable

☐
Neutre

☐
Favorable

☐
Très favorable
*Very unfavourable;
unfavourable;
neutral; favorable;
very favorable*

-
4. Globalement, l'accueil de notre service vous a laissé une impression...

On the whole, the welcome you received from our division left you with an impression that was...

☐
Très défavorable

☐
Défavorable

☐
Neutre

☐
Favorable

☐
Très favorable
*Very unfavourable;
unfavourable;*

*neutral; favorable;
very favorable*

5. Les entretiens et le contenu des échanges vous ont été...

The interviews and the content of the exchanges seemed to you to be...

☐
Très inutiles

☐
Inutiles

☐
Neutre

☐
Utiles

☐
Très utiles
*Extremely
unhelpful;
unhelpful; neutral;
useful; very useful*

6. Vos attentes et vos besoins ont été compris.

Your expectations and your needs were understood.

☐
Très en désaccord

☐
Désaccord

☐
Neutre

☐
Accord

☐
Très en accord
*slightly disagree;
disagree; neutral;
agree; highly agree*

7. Vous avez le sentiment d'avoir obtenu une réponse à votre demande.

You feel that your request has received a response.

☐
Très en désaccord

☐
Désaccord

☐
Neutre

☐
Accord

☐
Très en accord
*Highly disagree;
disagree; neutral;
agree; highly agree*

8. Globalement, la qualité des entretiens vous a laissé une impression...

On the whole, the quality of the interviews left you with an impression that was...

☐
Très défavorable

☐
Défavorable

☐
Neutre

☐
Favorable

☐
Très favorable
*Very unfavourable;
unfavourable;
neutral; favorable;
very favorable*

9. Globalement, votre conseiller ou conseillère vous a laissé une impression...

On the whole, your consultant left you with an impression that was...

☐
Très défavorable

☐
Défavorable

☐
Neutre

☐
Favorable

☐
Très favorable
*Very unfavourable;
unfavourable;
neutral; favorable;
very favorable*

10. Les conseils vous ont semblé pertinents.

The advice you received was relevant.

☐
Très en désaccord

☐
Désaccord

☐
Neutre

☐
Accord

☐
Très en accord

*Highly disagree;
disagree; neutral;
agree; highly agree*

11. Les observations faites vous ont semblé pertinentes.

The remarks that were made seemed to you to be relevant

☐	☐	☐	☐	☐
<i>Très en désaccord</i>	<i>Désaccord</i>	<i>Neutre</i>	<i>Accord</i>	<i>Très en accord</i>
				<i>Highly disagree; disagree; neutral; agree; highly agree</i>

12. La passation des tests et questionnaires vous a laissé une impression...

The writing of tests and questionnaires left you with an impression that was...

☐	☐	☐	☐	☐
<i>Très défavorable</i>	<i>Défavorable</i>	<i>Neutre</i>	<i>Favorable</i>	<i>Très favorable</i>
				<i>Very unfavourable; unfavourable; neutral; favorable; very favorable</i>

13. Les informations et la documentation vous ont laissé une impression...

The information and documents provided left you with an impression that was...

☐	☐	☐	☐	☐
<i>Très défavorable</i>	<i>Défavorable</i>	<i>Neutre</i>	<i>Favorable</i>	<i>Très favorable</i>
				<i>Very unfavourable; unfavourable; neutral; favorable; very favorable</i>

14. Globalement, les prestations offertes par le Service de Consultation vous ont laissé une impression...

All in all, the services offered by the Consulting Division left you with an impression that was...

☐	☐	☐	☐	☐
<i>Très défavorable</i>	<i>Défavorable</i>	<i>Neutre</i>	<i>Favorable</i>	<i>Très favorable</i>
				<i>Very unfavourable; unfavourable; neutral; favorable; very favorable</i>

15. Conseilleriez-vous à l'un-e de vos proches de s'adresser au Service de Consultation?

Would you suggest that a friend make use of the Consulting Service?

☐	☐	☐	☐	☐
<i>Très en désaccord</i>	<i>Désaccord</i>	<i>Neutre</i>	<i>Accord</i>	<i>Très en accord</i>
				<i>Highly disagree; disagree; neutral; agree; highly agree</i>

Appendix 7: Career Services evaluation questionnaire

Consultation evaluation. The questions below relate to your personal satisfaction with the services offered by the Rhodes University career centre. Please answer the questions spontaneously and honestly by marking a circle (0) in the corresponding space. The questionnaire is anonymous and the information gained from it is treated as confidential. Kindly answer all the questions.

General Services Evaluation

	Strongly Agree	Agree	Unsure	Disagree	Strongly Disagree
1. I was able to get an initial appointment in an acceptable amount of time	5	4	3	2	1
2. The email/telephonic communication left you with a satisfaction impression	5	4	3	2	1
3. I found the welcome at the reception courteous and respectful	5	4	3	2	1
4. I regard career counselling as a necessary part of the University	5	4	3	2	1
5. I was satisfied with the session(s) and the content of the interaction	5	4	3	2	1
6. Your expectations and your needs were understood	5	4	3	2	1
7. The advice you received was relevant and helpful	5	4	3	2	1
8. The results of tests and questionnaires were helpful	5	4	3	2	1
9. The remarks and feedback that were made seemed to you to be relevant	5	4	3	2	1
10. The information and documents provided left you with a satisfaction impression	5	4	3	2	1
11. Counselling helped me broaden my insight for a more effective future career	5	4	3	2	1
12. Career assessment helped me broaden my insight for a more effective future	5	4	3	2	1
13. Overall, I am satisfied with the quality of career counselling I received	5	4	3	2	1
14. I would not hesitate to return for career counselling if I felt the need	5	4	3	2	1
15. I would recommend career counselling to a friend	5	4	3	2	1

Please comment on your experience of career assessment:

Describe the test that was most useful: _____

Please note any additional comments here

Thank you ☺

Appendix 8: Semi-structured Interview schedule (6 months follow-up)

Semi-structured Interview schedule for first follow-up interviews (6 months)

Introduction

Thank you for agreeing to talk with me today. (A brief reminder of research).

I would like to hear about your career assessment experience at the career centre. The information you give will be used for my PhD thesis. The information will also be made available to the staff at RUCC as it will help them understand how best to tailor career services to students, as well as the things that need to be improved.

Please note that in feeding back this information to RUCC, I will NOT disclose your name, nor will I disclose what you said to me unless you specifically ask me to. All conversations that we will have will be treated as STRICTLY confidential. Please also note that I will always double-check with you if I have understood what you have said to me correctly, and will make changes to my records if needed.

Please note that there are no right or wrong answers to the questions. Please feel free to be open and honest and be reassured that what you say here will not affect our relationship in any way going forward. If you do not wish to answer any questions please just say so and if you want to stop the interview at any time please let me know. The interview will last for about an hour. I would like to record the interview, is that okay with you? I'm not going to ask you about any personal information. What I'd like to hear about is your career assessment experience and what it has been like for you career related, following your career assessment.

Interview questions:

Career Assessment:

1. Can you remember why you did the career assessment, what was the aim?
2. Was the assessment helpful in any way? (in reaching your goal/aim)
3. What stood out from the career assessment process?
4. Can you reflect and elaborate on any specific test? (which test was most helpful)
5. How did you find the career assessment experience?
6. How did you find the overall career services?

Career decision-making

1. What assisted you in deciding to select your major subjects/degree?
2. Are you certain/happy with your selected major subjects/degree?
3. Was the assessment helpful in your decision-making process? If so, please elaborate. If not, kindly explain.

Factors that influence and impact on students' career decision-making?

1. What factors played a role in your career decision-making:
 - What do you think influences students' career decision-making?
 - What factors impacted your career decision-making?

Any last reflections?

A brief reminder of research and follow-up interview.

Appendix 9: Semi-structured Interview schedule (18 months follow-up)

Semi-structured Interview schedule for final follow-up interviews (18 months)

Introduction

(A brief reminder of research).

I would like to hear about your career journey, what it has been like for you following our last discussion, and how things have been for you career related.

Interview Questions

Career Trajectory:

- I would like to hear about your career trajectory, what has unfolded since our last discussion?
- Did you stick to your selected major subjects/selected degree choice/Have there been any changes? If so, elaborate.

Career decision-making:

- What assisted you in deciding to select your major subjects/degree?
- Can you remember why you did the career assessment?
- Reflecting back on the career assessment, feedback, and our last discussion, was the career assessment helpful in your decision-making process?
- Are there any further reflections about the tests that were used for the assessment?

Factors that influence and impact students' career decision-making?

- In your view, reflect on your own personal journey. What do you think influenced your career decision-making? (whilst studying)
- What factors played a role in your career decision-making process (selected major subjects/degree)?
- What are your future prospects?

Any last reflections?